

A.R.M. LOXAHATCHEE NATIONAL WILDLIFE REFUGE

ENHANCED WATER QUALITY PROGRAM

**8TH ANNUAL REPORT
CALENDAR YEAR 2011**

LOXA12-004

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ACRONYMS AND ABBREVIATIONS

ACME Special Drainage District, Village of Wellington
acre-ft acre-feet (volume reported as one acre in area by one foot in depth)
cfs cubic feet per second
Cl chloride
cm centimeter
DBHYDRO SFWMD's web portal for water quality data
DCS depth from water surface to consolidated substrate
DOI US Department of Interior
EVPA Federal Consent Decree compliance sampling network for Refuge
ft feet
FWM flow-weighted mean
km kilometer
L liter
LOXA Refuge's expanded water quality monitoring network
m meter
mg milligram
NGVD National Geodetic Vertical Datum
NO_x total concentration as nitrogen of oxides of nitrogen, NO₂ + NO₃
Refuge A.R.M. Loxahatchee National Wildlife Refuge
s second
SFWMD South Florida Water Management District
SO₄ sulfate
STA Stormwater Treatment Area
Tdepth depth of clear water column
TN total nitrogen
TP total phosphorus
µg microgram
µS cm⁻¹ microSiemens per centimeter (measure of conductivity)
USACE U.S. Army Corps of Engineers
USFWS U.S. Fish and Wildlife Service
USGS U.S. Geological Survey
WCA Water Conservation Area

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EXECUTIVE SUMMARY

Congress appropriated funds to the U.S. Fish and Wildlife Service in 2004 which funded an enhanced water quality monitoring network and hydrodynamic and water quality models to improve the scientific understanding of water quality in the Arthur R. Marshall Loxahatchee National Wildlife Refuge¹ (Refuge). The network and models provide information that is used in management decisions to better protect Refuge resources. The enhanced water quality monitoring network complements the compliance network monitored as a part of the 1992 Federal Consent Decree (Case No. 88-1886-CIV-MORENO) by characterizing the water quality of a larger Refuge area, particularly the fringe area potentially impacted by canal water intrusions. Monthly grab samples have been collected at 37 to 39 stations located in the marsh and canal since June 2004. The number of grab sample stations has reduced to 37 in recent years because two stations located near the canal were overrun with cattail making them inaccessible. Additionally, continuous measurements of conductivity have been collected along seven transects, four of which extend from surface water discharge points in the canal into the interior. This report is the sixth annual report, with analyses focused on January through December 2011, and with comparisons made to the preceding years (2004 through 2010).

Water quality data and analyses of canal water intrusion into the Refuge marsh presented in this report document continued intrusion of rim canal water into the Refuge interior, adding to a growing information base about canal water impacts to the Refuge. Intrusion of nutrient-rich and high conductivity water from the canal network surrounding the Refuge has been shown to negatively impact Refuge flora and fauna. Important insights gained from 2011 canal water intrusion analyses include:

- Canal water intruded into the marsh up to 3.4 km depending on timing and location.
- Rainfall total in 2011 for the Refuge and contributing basins was substantially lower than the historic average (1963 through 2010) and this year represents yet another year of drought conditions. This is the first year when Refuge management consciously accepted inflows without balancing those inflows with outflows. This operation was necessary to provide some water to the Refuge marsh to support the mosaic of habitats the Refuge supports.
- Intrusion of canal water into the marsh was sustained for a considerable period after the rainy season initiated (late June 2011). The extent of canal water intrusion into the marsh was maintained by the lack of water discharges from the Refuge during and after the inflows from July through October. These conditions have been shown to exacerbate Consent Decree excursions as was observed in November 2008 during the total phosphorus (TP) excursion event which occurred after inflows during November were reduced.

¹ Public Law 108-108; see House Report No. 108-195, p. 39-41 (2004)

Analyses of these data continue to support previously suggested management practices that have the potential to minimize intrusion. This year the Refuge did operate outside the boundaries of previous recommendations in an effort to maintain enough water to support forging wildlife in the Refuge. Regardless, a few of these recommendations are summarized as balancing inflow and outflow volumes, reducing the duration of inflows, and reducing inflow rates when the canal stage is lower than the marsh stage.

Based on the surface water conductivity data, the Refuge was classified into four geographic zones: (1) Canal Zone; (2) Perimeter Zone, located from the canal to 2.5 km (1.6 miles) into the marsh; (3) Transition Zone, located from 2.5 km (1.6 miles) to 4.5 km (2.8 miles) into the marsh; and (4) Interior Zone, greater than 4.5 km (2.8 miles) into the marsh. Overall, water quality conditions in the Perimeter continue to be different from, and more impacted than, the Interior Zone. Cattail expansion in the Refuge marsh, negative impacts to periphyton and *Xyris* spp. in response to nutrient and mineral enrichment, and displacement of sawgrass in the canal water-exposed areas of the marsh are a few examples of marsh impacts.

This report continues to document that water movement between the canals and the marsh is influenced by rainfall, structure-controlled water inflow and outflow into perimeter canals, the difference between canal and marsh stages, and marsh elevation. When combined with our understanding of canal water intrusion's influence on the marsh, these data continue to suggest that high-nutrient water is having a negative impact on the Refuge marsh (e.g., enriched soil TP, displacement of sawgrass by cattails, loss of *Xyris* spp., etc.).

ANNUAL PROGRAM SUMMARY

The objective of this section is to provide a general descriptive summary of environmental conditions, canal water intrusion into the Refuge marsh (movement of water from the perimeter canal into the marsh interior), and associated water quality in the Refuge from January through December 2011 following approaches presented in previous annual reports (USFWS 2007a, b; USFWS 2009; USFWS 2010a, b; USFWS 2012). Further, we compare results, particularly total phosphorus (TP), in 2010 to results presented in previous water quality reports covering the period from January 2004 through December 2010 (Harwell et al. 2005; USFWS 2007a, b; USFWS 2009; USFWS 2010a, b, USFWS 2012). Thus, this section serves as an update to the 2010 annual report (USFWS 2012) and briefly characterizes environmental conditions (e.g., rainfall, canal flows, marsh and canal stages, and water quality) associated with events of canal water intrusion into the marsh and water quality conditions during 2011.

Background

Prior to June 2004, water quality in the Refuge interior was monitored primarily using the 1992 Federal Consent Decree (Case No. 88-1886-CIV-MORENO) compliance network (EVPA). These 14 stations (**Figure 1**), monitored since 1978, characterize the central region of the interior marsh, leaving a relatively large region uncharacterized, predominantly in the outer, impacted fringe of the wetland (Harwell et al. 2005; USFWS 2007a, b; USFWS 2009; USFWS 2010a, b, USFWS 2012). In June 2004, the Refuge initiated an enhanced water quality monitoring network (LOXA) intended to improve the scientific understanding of water movement in and out of the Refuge marsh, water quality in the marsh, and to provide information that can be incorporated into water management decisions to better protect Refuge resources (Brandt et al. 2004). The enhanced monthly sampling focuses on areas near surface water discharge stations in areas uncharacterized by the EVPA network (**Figure 1**).

Water delivered to the Refuge originates as direct rainfall and canal water discharges from the surrounding basins. Stormwater treatment areas (STA) 1W and 1E treat the majority of water delivered to the Refuge via canals. Canal discharges are driven by rainfall in the surrounding basins, with a large volume delivered to the Refuge from the L-8 and S-5A basin (Burns and McDonnell Engineering Co, Inc. 2005). The L-8 basin discharges are generally a mixture of water from Lake Okeechobee and the S-5A and C-51 basins (Gary Goforth, Inc. 2008). The STA-1E water control plan indicates that during this interim period (through 2015), water discharges to tide (east coast – Lake Worth Lagoon) should approach 150,000 acre-ft, while the remainder of the water should be treated and distributed throughout the Everglades Protection Area (Refuge south to Florida Bay). Stormwater Treatment Areas 1W (180,000 acre-ft annually capacity) and 1E (165,000 acre-ft annually capacity) are to treat some of this water (Gary Goforth, Inc. 2008).

Water levels in the Refuge are managed by U.S. Army Corps of Engineers (USACE) based on the

1995 Water Regulation Schedule (USFWS 2000; USFWS 2007a, b; **Figure 2**). Inflows to the Refuge from the STAs or as bypass around the STAs are controlled by the South Florida Water Management District (SFWMD), while discharges from the Refuge are controlled by USACE. Since 2009, staff from the Refuge has held weekly calls with USACE to provide input on timing and volumes of discharges from the Refuge.

Methods

Environmental Conditions. Rainfall, flow, stage, and additional water quality data were downloaded from the South Florida Water Management District (SFWMD) data web portal, DBHYDRO and data were current as of March 20, 2012 (http://my.sfwmd.gov/portal/page?_pageid=2235,4688582&_dad=portal&_schema=PORTAL). All stage data presented in this report are relative to the NGVD 1929 datum. Data from the USGS 1-7 stage gage (**Figure 1**) were used as estimates of marsh stage values; canal stage data from the headwater gage of the G-94C outflow spillway structure (**Figure 1**) were used for continuity with previous reports. These data were also used to assess the number of days the canal and marsh stages were greater than 17 ft in any year, with 21 to 28 days being optimal for providing desired stages going into the dry season for proper recession and adequate water for hatchling foraging. Refuge inflow and outflow were aggregated as the total daily average flow. Inflow records for ACME-1, ACME-2, G-310, G-251, S-362, G-300, and G-301 were used for daily average inflow into the canals; outflow records at G-300, G-301, G-94A, G-94B, G-94C, S-10A, S-10C, S-10D, and S-39 were used for daily average outflow out of the canals (**Figure 1**). Data from G-338 also were considered, but the discharges were sparse and not included in these analyses. Daily rainfall data were averaged from the LOXWS, S-6, S-39, and S-5A weather stations to represent Refuge rainfall (**Figure 1**). Rainfall for the C-51 is represented by S-5A and WPB AIRP, and Pahokee1 and Pahokee2 represent rainfall for the S5A basins. Flows to the east of the Refuge from the S-5A, C-51, and L-8 basins are represented by pump structure S-155A.

Intrusion Monitoring. Conductivity acts as a conservative tracer of canal water; there are no biological or chemical processes in the surface water that significantly alter conductivity. Thus, these data can be used to track canal water intrusion into the marsh, which ultimately can be examined in relationship to water management operations. We determined the spatial and temporal extent of high conductivity canal water intrusion into the Refuge under different hydrologic conditions with emphasis on six of the seven Refuge conductivity transects (**Figure 1**), where temperature-compensated conductivity is collected hourly using conductivity data loggers. Also, we related changes in the extent of intrusion to water management activities affecting canal stages and flows into the Refuge, and determined the influence of natural meteorological events and hydrologic mechanisms on intrusion of high conductivity canal water.

We used the six conductivity transects to track water movement between the canal and the first six kilometers of the marsh (**Figure 1**). Two transects (STA-1E and STA-1W) were established near the outflow of STA-1W and STA-1E discharge structures. Two of the remaining transects (ACME-2 and Southeast) were established on the east side of the Refuge south of the STA-1E discharge structure. We established the Southeast (SE) transect late in July 2007 to

capture canal water intrusion in areas not previously characterized. The final two transects (S-6 and Extreme Southwest) were established on the west side of the Refuge south of the STA-1W discharge structure. The Extreme Southwest (ESW) transect also was established late in July 2007 to capture canal water intrusion signals in areas previously not characterized.

Seventy-five percent of canal monthly conductivity values were greater than $680 \mu\text{S cm}^{-1}$ and the maximum was $1,299 \mu\text{S cm}^{-1}$. Monthly Interior Zone conductivity levels remained below $315 \mu\text{S cm}^{-1}$ through 2011. Given this large difference in conductivity between the canal and the interior marsh, we use two conductivity levels, 350 and $500 \mu\text{S cm}^{-1}$, to help identify the distance into the interior marsh that canal water penetrated. Tracking was done using isopleths of conductivity generated from the hourly conductivity data. Isopleths are lines connecting points of equal value for a given metric. Elevation contours on a topographic map are examples of isopleths.

The two isopleths (350 and $500 \mu\text{S cm}^{-1}$) were chosen to sufficiently cover the conductivity gradient observed from the canal into the marsh. Further, laboratory and field studies have shown that high conductivity waters ($>300 \mu\text{S cm}^{-1}$) have adverse impacts on the ecosystem community structure (e.g., reduced growth rate of *Xyris* spp. (McCormick and Crawford 2006), shifts from sawgrass to cattail communities (Richardson 2010), altered periphyton community structure (Sklar et al. 2005).

Marsh Total Phosphorus. As in past years, monthly water quality samples were collected from the EVPA and LOXA monitoring networks (**Figure 1**). The EVPA network consists of 14 interior marsh stations collected cooperatively with the SFWMD and Refuge staff. Refuge staff solely-collect water samples from the 37 stations (five in the canal and 32 in the marsh) in the LOXA network. The number of grab sample stations has reduced from 39 to 37 since the program's inception because two stations located near the canal were overrun with cattail, making them inaccessible for water quality sampling. Samples for both networks generally are analyzed for more than 20 water quality parameters. Sample collection is confounded by water depth and sample station accessibility. When clear water depths are between 10 and 20 cm (3.9 and 7.9 inches), only partial samples are collected and analyzed for 6 of the 29 water quality parameters, including: TP, chloride, sulfate, temperature, depth, and specific conductance. When the clear water depths are below 10 cm (3.9 inches), no samples are collected and no data are recorded. This report only presents TP data. **Appendix A** presents summary statistics for all water quality parameters measured in the LOXA network.

Water Quality Zones. The Refuge interior was classified into several geographic zones based upon conductivity data variability and changes in median conductivity as a function of distance from the perimeter canal as presented in USFWS 2007a, b; 2009; 2010a, b, USFWS 2012. For the analyses presented here, the following zones were identified:

- Canal: stations located in the canal
- Perimeter: stations located from the canal to 2.5 km (1.6 miles) into the marsh

- Transition: stations located from 2.5 km to 4.5 km (1.6 to 2.8 miles) into the marsh
- Interior: stations located greater than 4.5 km (2.8 miles) into the marsh

Results

Environmental Conditions: S-5A and C-51 Basins. The 2011 S-5A (487,260 acre-ft) and C-51 (414,720 acre-ft) basins' rainfall volumes were lower than the average annual volumes since 1963 for the two basins (640,228 and 647,267 acre-ft respectively – **Figure 3a**). Dry season (November through May) 2011 rainfall in S-5A (102,840 acre-ft) and C-51 (108,240 acre-ft) basins were lower than most years since 2004 (**Figure 3a and b**). Further, wet season (June through October) 2011 rainfall in S-5A (373,260 acre-ft) and C-51 (299,100 acre-ft) were lower than most years since 2004.

Flows through the S-155A structure and inflows to STA-1E operate in concert. Discharges to the east coast via S-155A has a guideline limit of 150,000 acre-ft. In 2011, the volume of water discharged through S-155A was approximately 26,700 acre-ft, an order of magnitude lower than expected during normal operations. Inflows to STA-1E (**Figure 5a**) and STA-1W (**Figure 5b**) were lower than their individual treatment capacity of 165,000 acre-ft yr⁻¹ and 180,000 acre-ft yr⁻¹, respectively (Gary Goforth, Inc. 2008) in 2011, similar to most of the preceding years since 2004.

Environmental Conditions and Canal Intrusion: Refuge. Rainfall on the Refuge in 2011 was approximately 453,000 acre-ft (**Figure 6a**), while dry season rainfall was 119,712 acre-ft and wet season rainfall was 328,238 acre-ft (**Figure 6b**). Rainfall on the Refuge was lowest of any year since 2004. Refuge canal total annual inflow in 2011 (177,408 acre-ft) was lower than any year since 2004 (**Figure 6c**). Dry (23,108 acre-ft) and wet (117,655 acre-ft) season inflows in 2011 were the lowest during the period of record from 2004 through 2011. Mean canal and marsh stage in 2011 were lower than any year since 2004 (Table 2).

Daily flow peaked several times throughout the year in 2011 (**Figure 7a and 8a**). Continuing from December 2010, water stages in the canal and marsh declined through mid-June 2011. Flow peaks of approximately 1,150 cfs during late January and April resulted in reversals in the canal, but had very little impact on stage in the interior marsh. Stage in the marsh and canal began to rise in mid-June coincident with the increase in rainfall and resulting inflows that would last through most of September 2011. A large pulse of inflows (1,000 to 3,700 cfs) over a week at the end of October going into November resulted in water stages in the marsh and canal increase up to about 16.5 ft, shy of the hydrological target for the year. At the onset of this flow event, canal stages had already increased above marsh stages and these inflows exacerbated this situation and resulted in canal water intrusion of 1.7 to 3.4 km into the marsh along western transects and 1.4 to 2.3 km along the eastern transects. Outflows were maintained close to 0 cfs through most of the year and once intrusion occurred at the end of the year, there was only modest receding of these canal waters from the marsh.

Total Phosphorus and Intrusion Dynamics. Flow-weighted mean TP concentration discharged to the Refuge from STA-1E and STA-1W in 2011 range from 16 to 36 ppb through the year, while

canal concentration ranged from 20 to 62 ppb (**Figure 9a**). Canal FWM TP concentrations peaked in July following the onset of rainfall and the resulting inflows. Perimeter Zone TP concentrations ranged from 7 to 24 ppb, Transition Zone ranged from 7 to 21 ppb, and Interior Zone ranged from 6 to 28 ppb (**Figure 9b**). Peak TP concentrations in the Transition and Interior Zones occurred before May, when stages were lowest and reflects the collection of samples when water depth were approaching the minimum sampling depth and water minerals and nutrients tend to concentrated. Peak Perimeter Zone TP concentrations occurred in July, following the onset of rainfall and inflows and the peak was likely linked to the rewetting of the marsh.

Discussion

Since the initiation of the enhanced water quality monitoring and modeling program, the 2011 environmental conditions for the Refuge and contributing basins represent another year of drought conditions. These conditions resulted in the Refuge failing to meet a high stage hydrologic target established to promote ecological benefits. The target must be met at least 3 of 4 years, so failing to meet the target this year should not be detrimental as we achieved the target in the preceding years. However, in 2012 we will need to meet the target again. Further, the drought conditions in the beginning of the year allowed marsh surface water to decline to low levels concentrating water column constituents and increasing TP concentrations across the marsh until the marsh became too dry to sample. Following the initiation of the rainy season, TP concentrations increased above 10 ppb across the marsh, likely linked to the resuspension of TP from the soils. The elevated TP concentration in the marsh were then supported by elevated canal TP concentration once stages in the canal increased above the marsh stage and these waters intruded into the marsh by more than 2 km in some areas of the Refuge.

The drought conditions were regional, resulting in very little water contributed to the system from the S-5A and C-51 basins and minor bypasses around the Refuge for water supply via the S-155A discharge structure. This dynamic resulted in a unique hydrologic operation for the system in 2011. For much of the year following the initiation of the rainy season, little water was released from the system. To get the water stage up high enough to submerge most marsh areas, with exception of the northern area, outflows were ceased and the only water losses from the system were a result of evapotranspiration and seepage. Although there was some pressure to release water for water supply to the east, a collaborative effort between Refuge staff, the USACE, and the Lake Worth Drainage District (neighboring management district located on the eastern boundary of the Refuge) prevented this from occurring.

Previous annual reports for the Refuge (Harwell et al. 2005; USFWS 2007a, b; USFWS 2009; USFWS 2010a, b, USFWS 2012) have presented water management suggestions, including dry-down frequencies and minimization of canal water intrusion. Some of those suggestions focused on controlling inflows and outflows to minimize canal water intrusion into the marsh. In the 2005, 2006, 2007, 2008, 2009, and 2010 annual reports, we suggested that if canal water inflows were necessary, the inflow rate should be below 200 cfs ($6 \text{ m}^3 \text{ s}^{-1}$) and for a short

duration (< five days). Alternatively, if high inflows were necessary and canal and marsh stages were greater than the marsh sediment elevation, then outflows should be timed to inflows and be greater than inflows. The recommended timing, volume, or duration of outflows with respect to inflows was not extensively observed in 2011, similar to 2004 through 2007, most of 2008, and 2009. However, this year, because of drought conditions, we did accept water without coincident releases following the initiation of the rainy season to provide needed water for the ecosystem and these operations did allow some substantial and sustained water intrusion events. Regardless, we continue to support the water management recommendation to reduce canal water intrusion as characterized here and in previous reports (USFWS 2007a, b; USFWS 2009; USFWS 2010a, b). Some of these management recommendations include (**Table 1**):

- Refuge inflows should be short duration (≤ 5 days) pulses of < 200 cfs ($6 \text{ m}^3 \text{ s}^{-1}$) when absolute canal/marsh stage difference is < 0.2 ft (< 0.1 m) and interior water depths are < 0.5 ft (< 0.2 m).
- Refuge inflow rates can be moderate (200 to 400 cfs; 6 to $11 \text{ m}^3 \text{ s}^{-1}$) for short durations if marsh stage is > 0.6 ft (> 0.2 m) higher than canal stage and waters depths are < 0.3 ft (< 0.1 m).
- If Refuge inflows must be extended beyond short-duration pulses at high volumes and there is nowhere else to send water during these inflows, outflow should occur as soon as possible to moderate the extent of intrusion.

We have presented our recommendations at several forums to water managers and the various agencies responsible for making water management decisions. These forums include direct communication from Refuge managers, Refuge specific weekly water coordination meeting with the USACE, quarterly regional water coordination meetings, and periodic calls with the Corps of Engineers. The quarterly water coordination meetings focus on water management for the northern portion of the Everglades (from Lake Okeechobee down to Water Conservation Area 2) and consist of multiple agencies (e.g., U.S. Fish and Wildlife Service, National Park Service, Corps of Engineers, Lake Worth Drainage District, Florida Fish and Wildlife Conservation Commission, South Florida Water Management District). Periodic calls with the Corps of Engineers focus on water management under the various water regulation schedules for each of the Water Conservation Areas.

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Table 1. Evolution of water management recommendation based on water quality analysis since 2004.

Recommendation
Refuge inflows should be short duration (≤ 5 days) pulses of $< 5655 \text{ L s}^{-1}$ ($< 200 \text{ cfs}$) when absolute canal/marsh stage difference is $< 0.1 \text{ m}$ ($< 0.2 \text{ ft}$) and interior water depths are $< 0.2 \text{ m}$ ($< 0.5 \text{ ft}$).
Refuge inflow rates can be moderate 5655 to $11,310 \text{ L s}^{-1}$ (200 to 400 cfs) for short durations if marsh stage is $> 0.2 \text{ m}$ ($> 0.6 \text{ ft}$) higher than canal stage by and waters depths are $< 0.1 \text{ m}$ ($< 0.3 \text{ ft}$).
Refuge inflows should be discontinued when the canal stage is $> 0.1 \text{ m}$ ($> 0.2 \text{ ft}$) higher than marsh stage, unless the rainfall or outflow volumes are 3 to 4-times higher than the inflows.
Refuge inflows should be discontinued when the canal stage is $> 0.2 \text{ ft}$ ($> 0.1 \text{ m}$) higher than marsh stage, unless the rainfall or outflow volumes are equal to or greater than inflows.
If Refuge inflows must be extended beyond short-duration pulses, outflow should be greater than inflow and last several days longer.
If Refuge inflows must be extended beyond short-duration pulses, outflow should be equal to or greater than inflow and last several days longer.
If Refuge inflows must be maintained at high rates, the S-10s and S-39 should be opened to create outflow 3 or 4-times higher than inflow.
If Refuge inflows must be maintained at high rates, the S-10s and S-39 should be opened in conjunction with canal inflows to create outflow equal to higher than inflow.
If Refuge inflows must be extended beyond short-duration pulses at high volumes and there is nowhere to send water during these inflows, outflow should proceed as soon as practicable to moderate the extent of intrusion the marsh receives from the original inflows.

Table 2. Mean, 25th and 75th percentiles, and number of days marsh (1-7) and canal (G94C) stage are greater than or equal to 17 ft.

Year	Mean		25th Percntile		75th Percntile		Days >= 17 ft	
	1-7 ft	G-94C ft	1-7 ft	G-94C ft	1-7 ft	G-94C ft	1-7 days	G-94C days
2004	16.37	15.51	16.04	14.94	16.68	16.57	21	17
2005	16.30	16.09	16.12	15.71	16.46	16.36	0	0
2006	16.32	16.17	16.08	15.82	16.57	16.58	14	17
2007	16.35	15.83	15.96	14.92	16.81	16.83	53	54
2008	16.68	16.46	16.49	16.21	16.92	16.89	65	62
2009	16.35	16.03	16.16	15.71	16.59	16.54	0	0
2010	16.62	16.39	16.52	16.05	16.71	16.71	0	7
2011	15.83	15.43	15.67	14.63	16.29	16.21	0	0

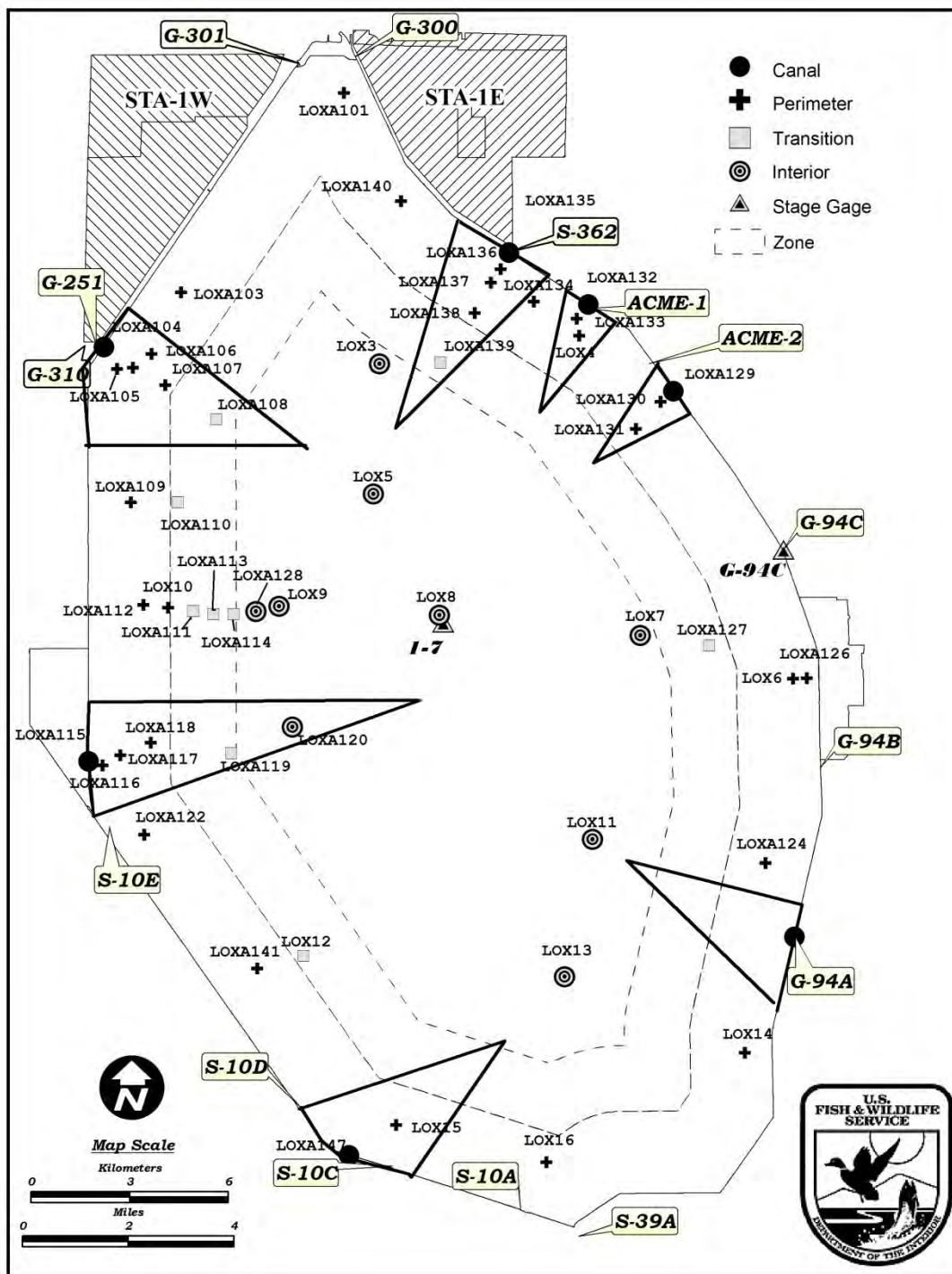


Figure 1. LOXA (LOXA###) and EVPA (LOX#) water quality monitoring stations, inflow and outflow structures, and canal and marsh stage gages used in this report. Solid polygons delineate transects, dashed polygons represent marsh zones.

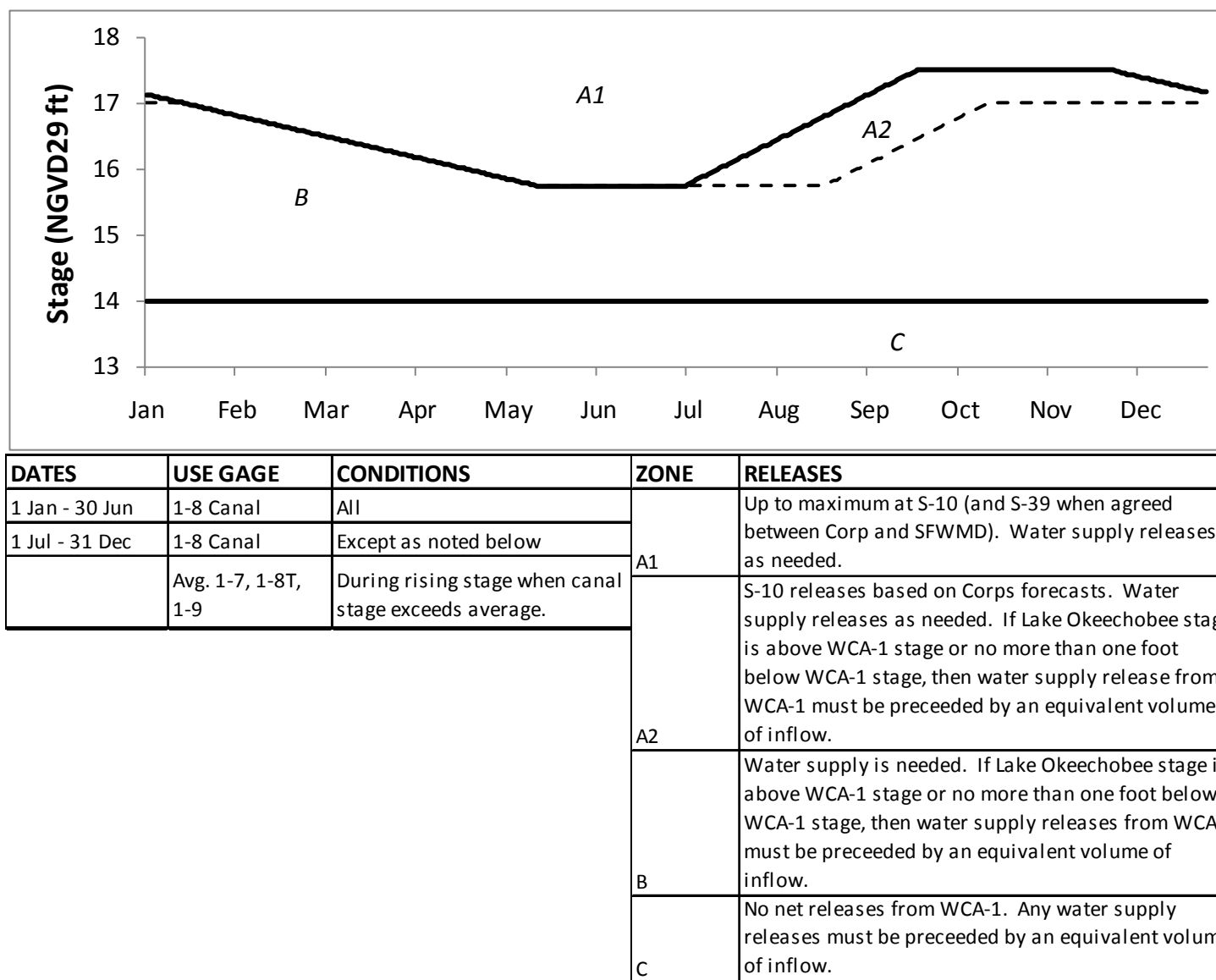


Figure 2. Water Regulation Schedule for the Arthur R. Marshall Loxahatchee National Wildlife Refuge (USACE 1994).

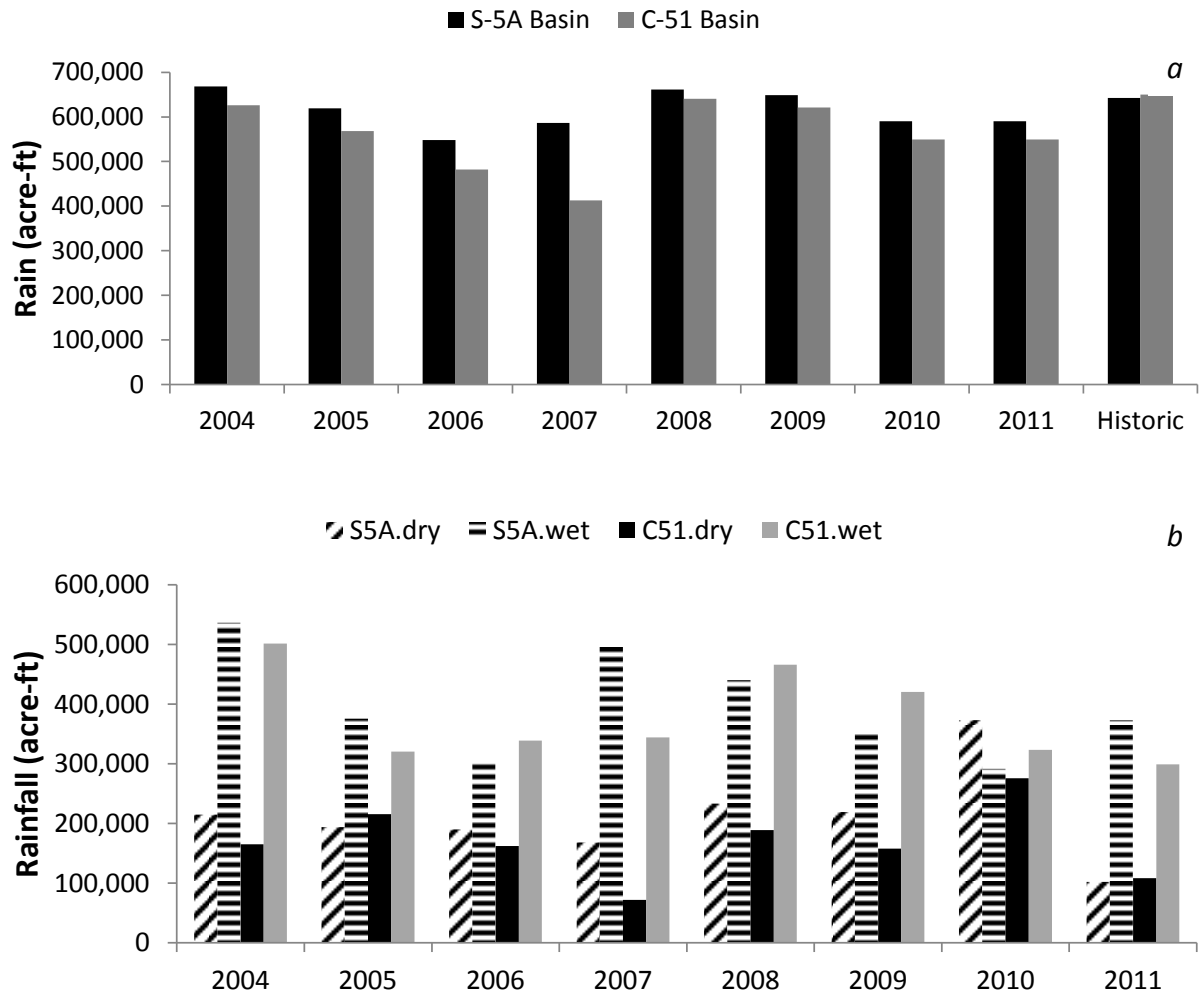


Figure 3. (a) Total annual and (b) dry and wet season rainfall for the S-5A and C-51 basins. Historic rainfall was determined from 1963 through 2011.

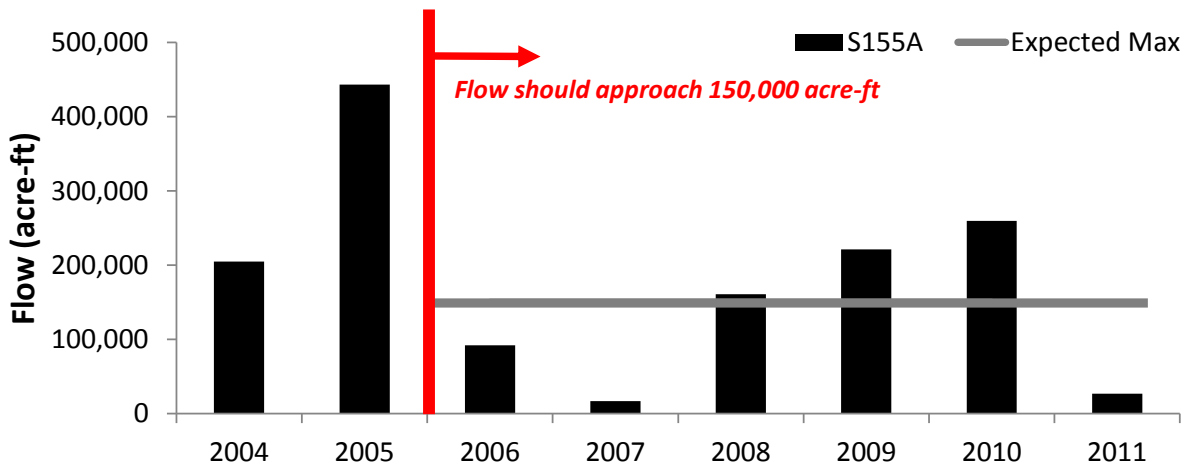


Figure 4. Total annual flows through the S-155A structure. The red vertical bar represents the period when flows through S-155A should approach 150,000 acre-ft as a mixture of L-8 and C-51 basin runoff (Gary Goforth, Inc. 2008). The horizontal grey bar represents the expected maximum (150,000 acre-ft) through S-155A.

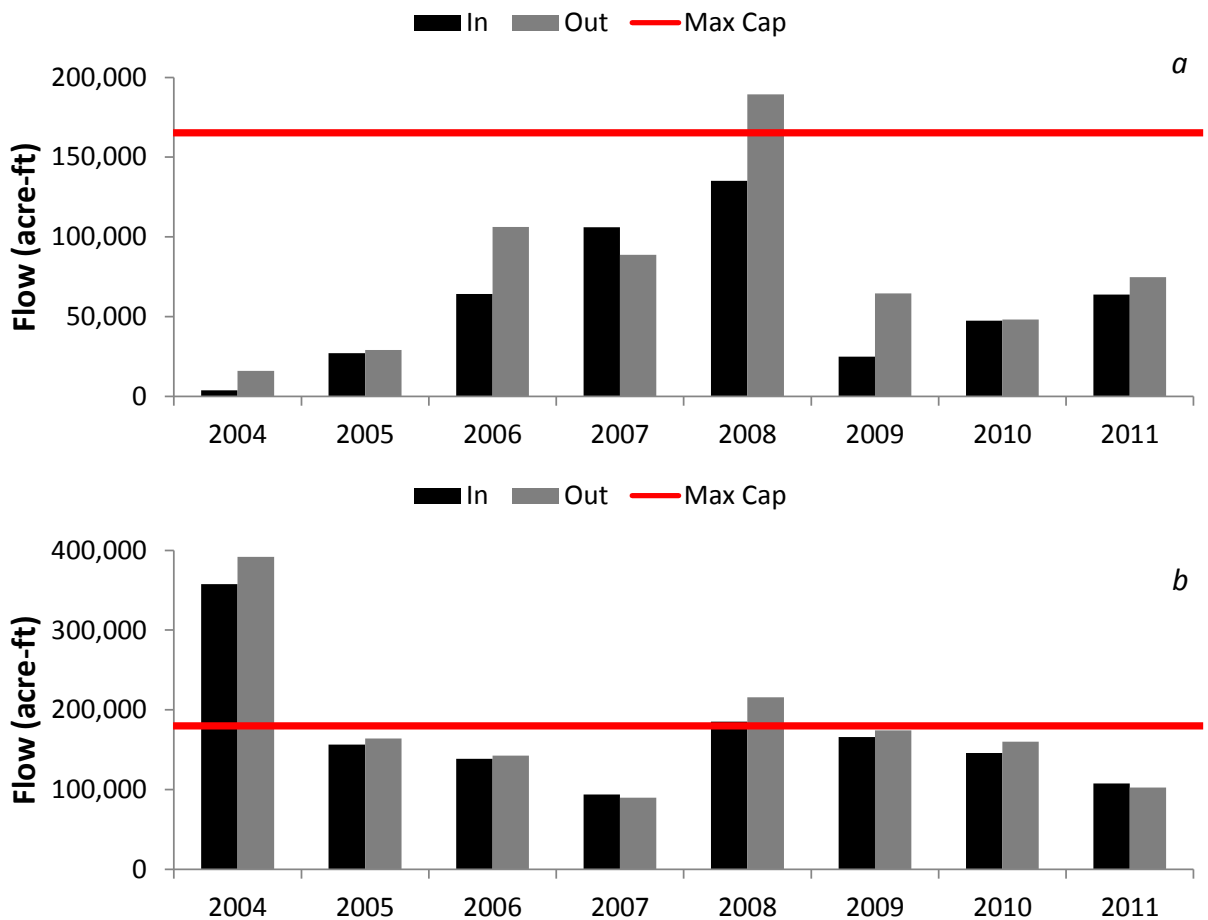


Figure 5. (a) STA-1E and (b) STA-1W annual inflow and outflow volumes. Horizontal red lines represent maximum treatment capacities for STA-1E (165,000 acre-ft) and STA-1W (180,000 acre-ft; Gary Goforth, Inc. 2008).

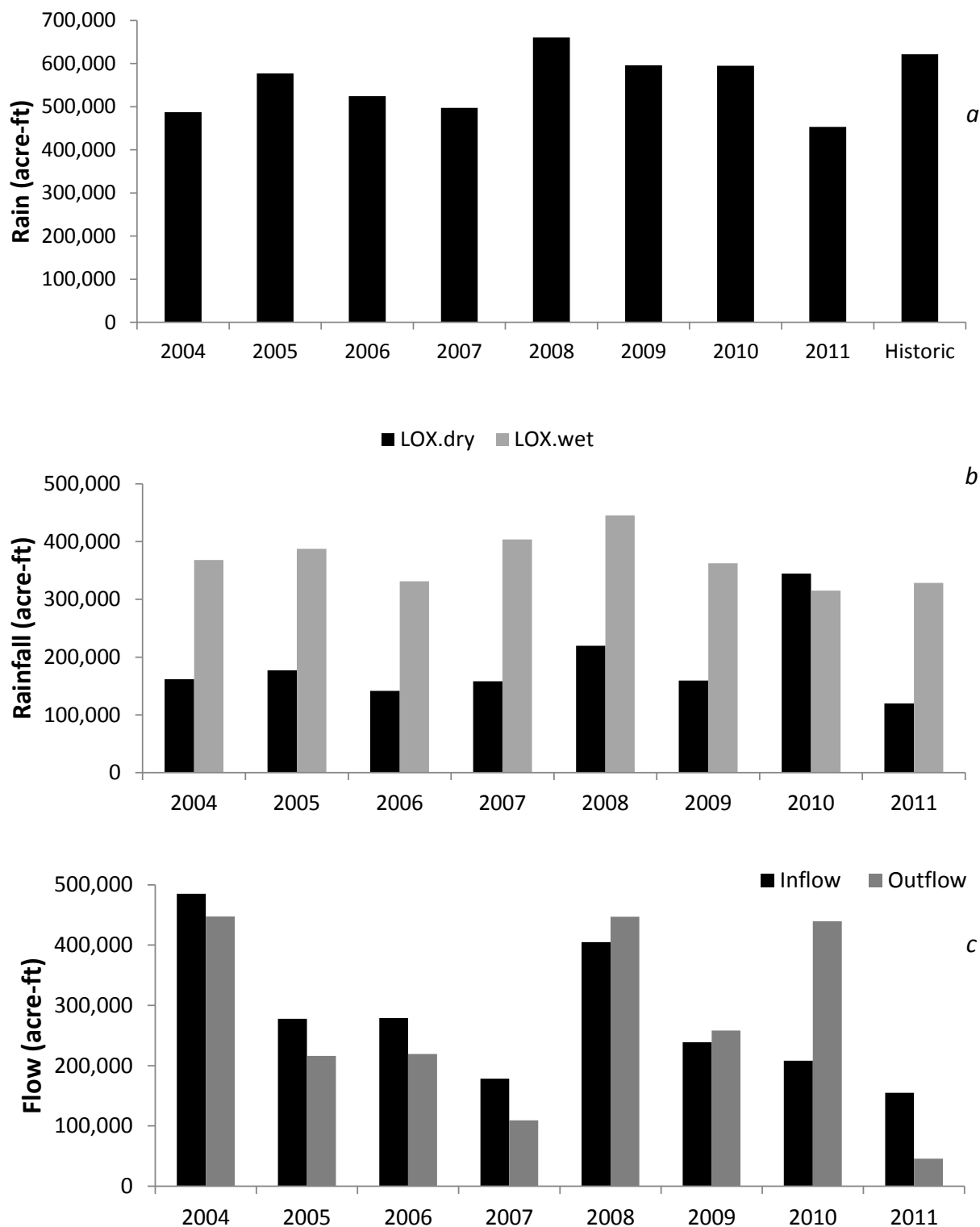


Figure 6. (a) Total annual rainfall, (b) total dry and wet season rainfall, and (c) inflow and outflow for the Refuge. Historic rainfall was determined from 1963 through 2011.

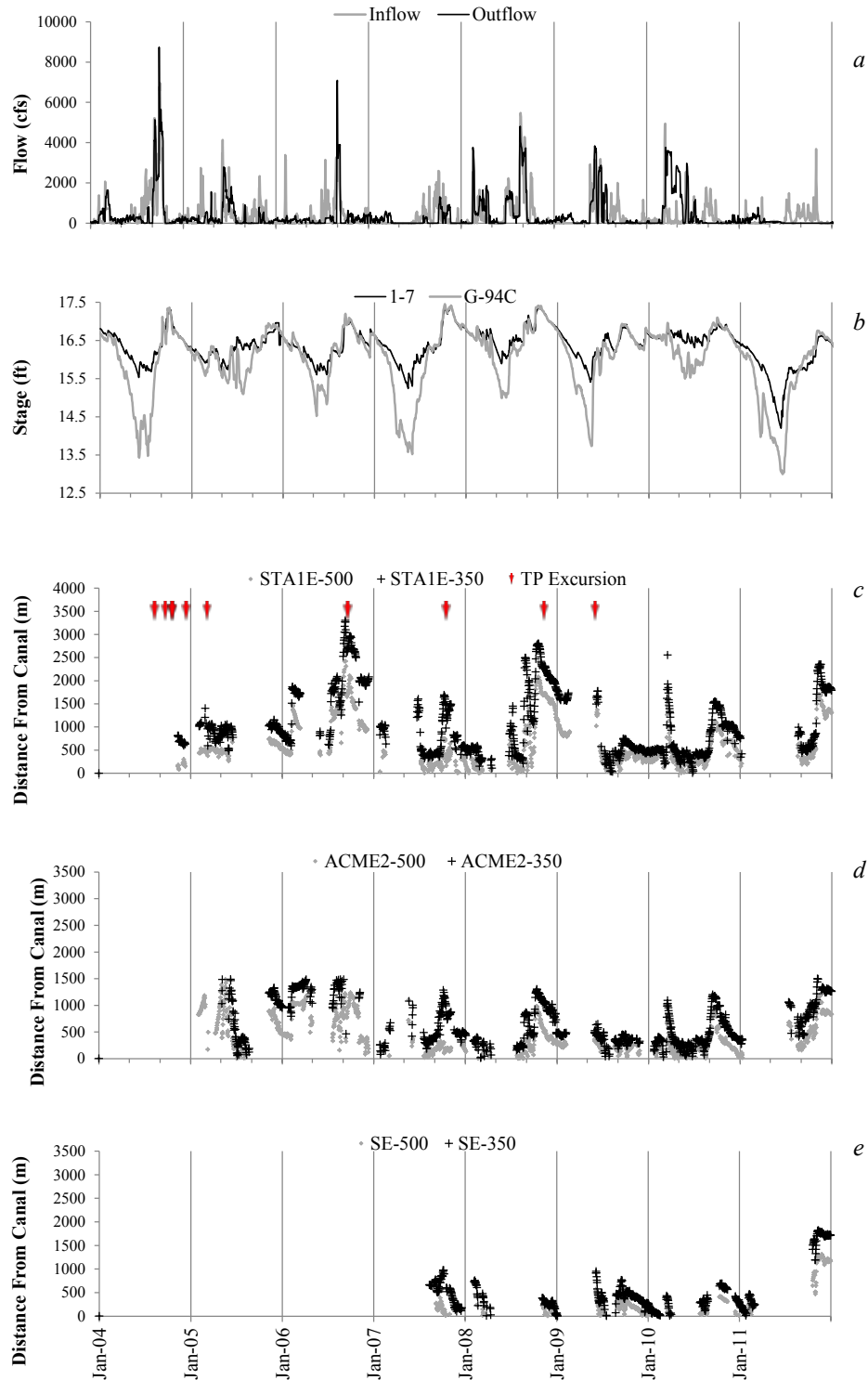


Figure 7. a) Inflow and outflow rates (cfs) summed for all structures from January 2004 to December 2011. b) Canal (G-94C) and marsh (1-7) stage levels (NGVD29). The 350 $\mu\text{S cm}^{-1}$ and 500 $\mu\text{S cm}^{-1}$ conductivity isopleths used to track canal water movement into and out of the marsh interior for: c) STA-1E, d) ACME-2, and e) SE transects. Red arrows indicate total phosphorus Consent Decree excursions.

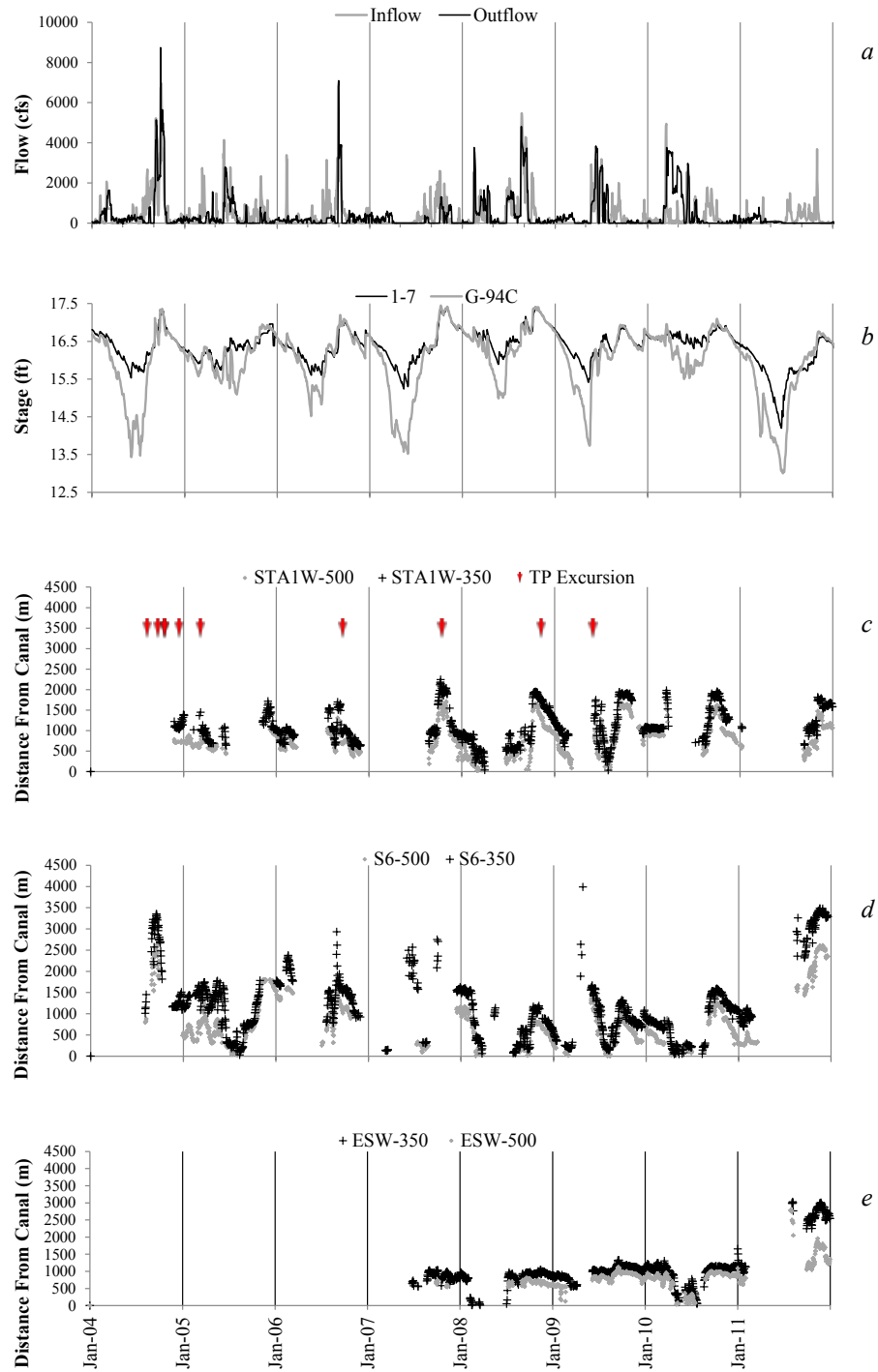


Figure 8. a) Inflow and outflow rates (cfs) summed for all structures from January 2004 to December 2011. b) Canal (G-94C) and marsh (1-7) stage levels (NGVD29). The $350 \mu\text{S cm}^{-1}$ and $500 \mu\text{S cm}^{-1}$ conductivity isopleths used to track canal water movement into and out of the marsh interior for: c) STA-1W, d) S-6, and e) the new ESW transects. Red arrows indicate total phosphorus Consent Decree excursions.

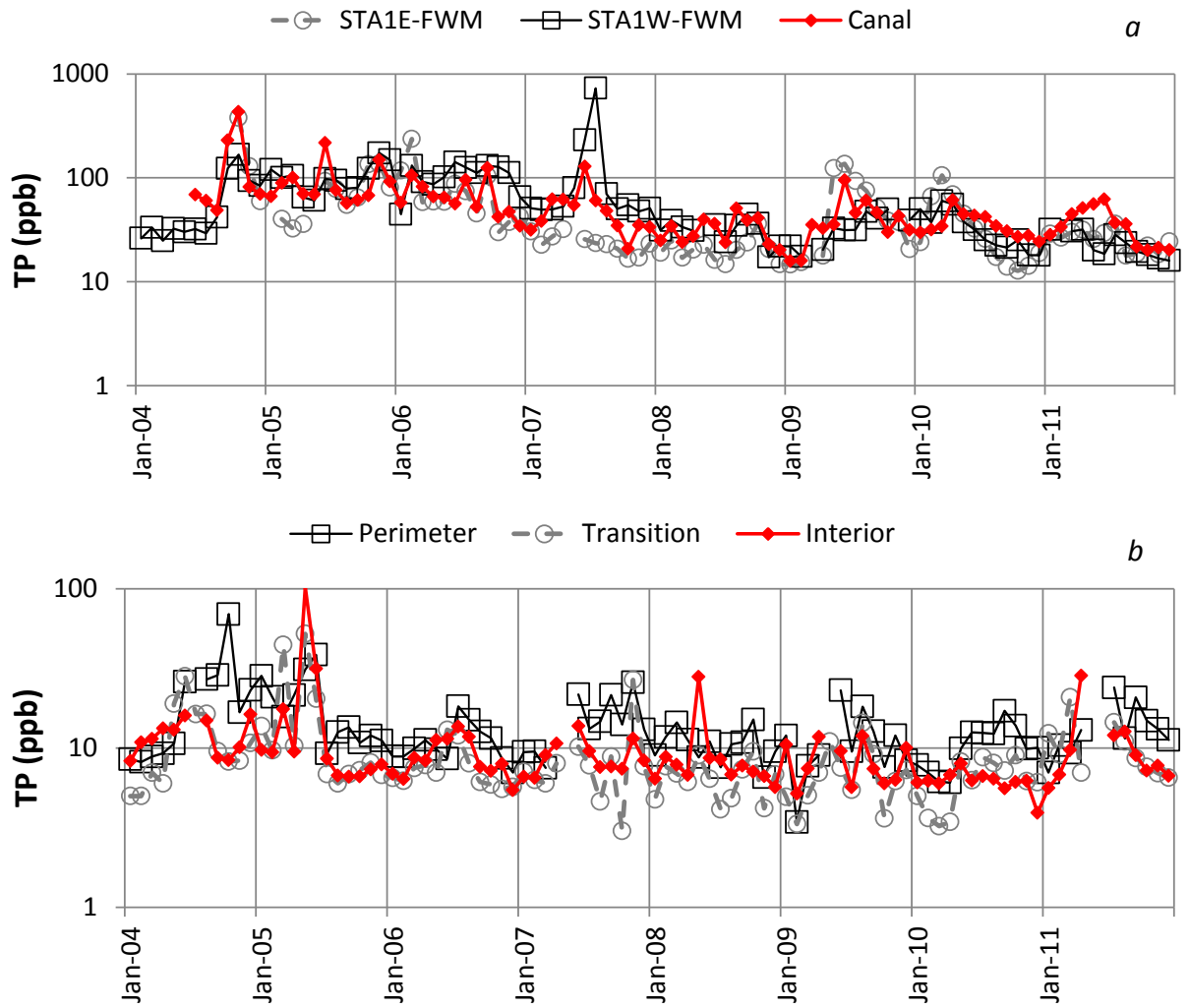


Figure 9. (a) Monthly TP FWM from Refuge inflow structures and TP concentration in the canal. (b) Monthly mean TP concentrations in marsh zones. The y-axes are based on a logarithmic scale.

APPENDIX A

Table A-1. (a) Parameter abbreviations spelled-out. (b) Individual EVPA and LOXA station summary statistics of water quality data for calendar year 2009. Where values were below the minimum detection limits, one-half of the minimum detection limit is reported (Weaver et al. 2008). Previous summary statistics (2004 – 2009) can be found in the previous annual reports (USFWS 2007a, b, 2009, 2010a, b).

a

ABBREVIATION	TERM	UNIT
TEMP	Temperature	Celsius
DO	Dissolved oxygen	mg L ⁻¹
SPCOND	Specific conductance	µS cm ⁻¹
pH	pH	
TURB	Turbidity	mg L ⁻¹
TSS	Total suspended solids	mg L ⁻¹
NOX	Nitrate+nitrite	mg L ⁻¹
TKN	Total Kjeldahl Nitrogen	mg L ⁻¹
TN	Total nitrogen	mg L ⁻¹
OPO4	Orthophosphate	µg L ⁻¹
TP	Total phosphorus	µg L ⁻¹
SIO2	Silica	mg L ⁻¹
CA	Calcium	mg L ⁻¹
CL	Chloride	mg L ⁻¹
SO4	Sulfate	mg L ⁻¹
ALKALNYA	Alkalinity	mg L ⁻¹
TDOC	Total dissolved organic carbon	mg L ⁻¹
TOC	Total organic carbon	mg L ⁻¹
TDS	Total dissolved solids	mg L ⁻¹

b

PERIOD	STATION	STATISTIC	LOXA101	LOXA102	LOXA103	LOXA104	LOXA105	LOXA106	LOXA107	LOXA108	LOXA109
2004-2010	ALK	Mean	149.19	82.90	75.41	191.24	163.06	113.93	79.87	35.79	55.49
2011	ALK	Mean	154.00	58.65	48.80	161.92	131.50	96.10	NA	11.80	66.93
2004-2010	ALK	Standard Deviation	1,810.83	2,285.79	2,073.80	2,681.93	1,841.93	1,778.52	2,283.86	5,438.17	649.92
2011	ALK	Standard Deviation	512.00	80.65	2.00	910.81	977.25	95.22	NA	0.72	258.20
2004-2010	ALK	25th Percentile	120.00	55.00	45.00	150.00	132.50	80.00	45.80	14.00	40.00
2011	ALK	25th Percentile	146.00	55.48	48.30	133.75	117.75	92.65	NA	11.50	55.43
2004-2010	ALK	Median	152.00	62.00	66.00	190.00	162.00	102.00	53.00	16.90	48.00
2011	ALK	Median	154.00	58.65	48.80	165.50	138.00	96.10	NA	11.80	63.65
2004-2010	ALK	75th Percentile	178.50	110.00	84.00	220.75	200.00	142.00	100.00	22.00	60.50
2011	ALK	75th Percentile	162.00	61.83	49.30	180.50	148.50	99.55	NA	12.10	75.15
2004-2010	ALK	Count	31	21	25	78	31	27	11	18	55
2011	ALK	Count	2	2	2	12	3	2	0	2	4
2004-2010	CA	Mean	50.97	23.60	21.86	62.17	50.02	34.12	21.99	6.02	16.81
2011	CA	Mean	52.05	20.40	16.60	51.57	44.57	34.10	NA	6.76	24.15
2004-2010	CA	Standard Deviation	213.95	233.77	221.14	368.58	251.56	214.33	268.96	2.20	76.29
2011	CA	Standard Deviation	14.05	6.48	0.02	96.08	155.52	23.12	NA	0.17	14.84
2004-2010	CA	25th Percentile	40.65	15.00	12.00	46.65	37.75	21.85	13.10	5.03	11.40
2011	CA	25th Percentile	50.73	19.50	16.55	44.13	38.55	32.40	NA	6.62	22.10
2004-2010	CA	Median	49.00	18.00	17.40	60.00	52.10	31.00	14.00	5.75	13.70
2011	CA	Median	52.05	20.40	16.60	52.25	45.40	34.10	NA	6.76	23.00
2004-2010	CA	75th Percentile	59.85	25.00	24.00	74.75	64.30	43.90	23.50	6.87	18.35
2011	CA	75th Percentile	53.38	21.30	16.65	59.63	51.00	35.80	NA	6.91	25.05
2004-2010	CA	Count	31	21	25	78	31	27	11	18	55
2011	CA	Count	2	2	2	12	3	2	0	2	4
2004-2010	CL	Mean	90.35	38.94	40.71	111.80	82.02	54.18	31.71	26.83	34.47
2011	CL	Mean	119.00	47.30	33.70	133.58	91.73	80.27	29.20	33.53	69.85
2004-2010	CL	Standard Deviation	858.59	515.19	599.21	1,307.72	1,362.25	825.63	466.44	78.90	404.78
2011	CL	Standard Deviation	130.00	57.61	50.04	726.08	1,271.17	525.50	8.00	83.37	1,265.17
2004-2010	CL	25th Percentile	69.25	25.50	21.33	91.65	53.55	30.30	21.75	19.10	21.15
2011	CL	25th Percentile	113.00	44.25	30.70	113.50	67.73	71.20	28.20	29.20	41.40
2004-2010	CL	Median	92.00	33.00	34.45	120.00	77.50	51.00	26.00	27.00	28.00
2011	CL	Median	114.00	49.70	35.50	126.50	97.25	87.90	29.20	34.40	88.55
2004-2010	CL	75th Percentile	118.00	41.90	49.60	140.00	110.00	67.00	29.08	33.20	42.00
2011	CL	75th Percentile	130.00	51.55	37.60	149.75	121.25	93.15	30.20	38.30	91.75
2004-2010	CL	Count	55	41	46	75	51	49	28	39	60
2011	CL	Count	5	3	3	12	4	3	2	3	6

PERIOD	STATION	STATISTIC	LOXA101	LOXA102	LOXA103	LOXA104	LOXA105	LOXA106	LOXA107	LOXA108	LOXA109
2004-2010	DCS	Mean	0.28	0.23	0.25	0.98	0.34	0.27	0.19	0.22	0.42
2011	DCS	Mean	0.16	0.07	0.12	1.00	0.16	0.10	0.06	0.11	0.27
2004-2010	DCS	Standard Deviation	0.02	0.02	0.02	0.01	0.02	0.02	0.01	0.01	0.03
2011	DCS	Standard Deviation	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.01
2004-2010	DCS	25th Percentile	0.19	0.12	0.13	1.00	0.23	0.17	0.10	0.14	0.34
2011	DCS	25th Percentile	0.16	0.06	0.10	1.00	0.11	0.08	0.05	0.09	0.26
2004-2010	DCS	Median	0.26	0.21	0.21	1.00	0.33	0.23	0.17	0.20	0.41
2011	DCS	Median	0.16	0.07	0.10	1.00	0.17	0.11	0.05	0.09	0.30
2004-2010	DCS	75th Percentile	0.37	0.33	0.36	1.00	0.45	0.37	0.27	0.29	0.54
2011	DCS	75th Percentile	0.17	0.08	0.14	1.00	0.22	0.12	0.07	0.14	0.31
2004-2010	DCS	Count	62	62	67	36	62	63	62	64	68
2011	DCS	Count	3	3	3	9	4	4	3	5	4
2004-2010	NA	Mean	50.06	42.68	47.29	88.17	64.06	47.88	50.70	18.75	31.63
2011	NA	Mean	NA	NA	NA	NA	NA	NA	NA	NA	NA
2004-2010	NA	Standard Deviation	201.37	748.85	412.81	450.80	385.95	202.94	662.41	17.06	322.62
2011	NA	Standard Deviation	NA	NA	NA	NA	NA	NA	NA	NA	NA
2004-2010	NA	25th Percentile	43.10	22.15	33.00	68.60	48.90	37.63	42.15	15.45	17.60
2011	NA	25th Percentile	NA	NA	NA	NA	NA	NA	NA	NA	NA
2004-2010	NA	Median	51.70	34.45	35.20	89.55	56.00	43.15	63.20	18.25	25.50
2011	NA	Median	NA	NA	NA	NA	NA	NA	NA	NA	NA
2004-2010	NA	75th Percentile	57.30	56.58	60.65	96.23	77.80	54.68	65.50	21.55	49.70
2011	NA	75th Percentile	NA	NA	NA	NA	NA	NA	NA	NA	NA
2004-2010	NA	Count	8	6	7	18	9	6	3	4	13
2011	NA	Count	0	0	0	0	0	0	0	0	0
2004-2010	SIO2	Mean	15.80	16.70	15.97	15.11	18.39	16.69	17.67	5.13	8.65
2011	SIO2	Mean	13.00	5.37	8.89	15.36	20.37	14.50	NA	2.79	14.47
2004-2010	SIO2	Standard Deviation	74.61	54.00	63.04	60.97	75.22	108.98	109.93	6.19	37.09
2011	SIO2	Standard Deviation	0.98	50.60	0.37	34.00	21.66	0.00	NA	0.67	19.34
2004-2010	SIO2	25th Percentile	9.90	12.80	11.00	8.53	13.50	8.73	10.60	3.65	4.29
2011	SIO2	25th Percentile	12.65	2.86	8.68	12.10	18.10	14.50	NA	2.50	13.32
2004-2010	SIO2	Median	14.70	15.90	16.00	15.00	19.00	18.00	17.00	4.60	8.20
2011	SIO2	Median	13.00	5.37	8.89	13.20	20.60	14.50	NA	2.79	15.05
2004-2010	SIO2	75th Percentile	21.50	19.00	21.00	22.00	25.00	23.10	22.50	6.50	11.50
2011	SIO2	75th Percentile	13.35	7.89	9.11	21.68	22.75	14.50	NA	3.08	16.20
2004-2010	SIO2	Count	31	21	25	77	31	27	11	18	55
2011	SIO2	Count	2	2	2	12	3	2	0	2	4

PERIOD	STATION	STATISTIC	LOXA101	LOXA102	LOXA103	LOXA104	LOXA105	LOXA106	LOXA107	LOXA108	LOXA109
2004-2010	SO4	Mean	13.89	7.10	5.78	45.85	20.37	10.61	5.11	0.26	5.00
2011	SO4	Mean	11.73	3.64	1.64	53.62	30.30	15.88	1.09	0.54	6.31
2004-2010	SO4	Standard Deviation	177.16	140.79	121.83	565.47	359.83	181.48	124.63	0.18	49.94
2011	SO4	Standard Deviation	99.84	1.38	0.07	211.49	283.19	101.34	0.23	0.00	21.63
2004-2010	SO4	25th Percentile	3.63	1.33	0.97	27.00	6.88	2.23	0.72	0.03	1.20
2011	SO4	25th Percentile	3.66	3.01	1.49	43.00	20.45	10.07	0.92	0.54	2.34
2004-2010	SO4	Median	8.40	2.30	1.70	45.00	11.00	4.50	1.10	0.10	1.70
2011	SO4	Median	8.20	3.42	1.54	54.05	29.65	10.20	1.09	0.54	6.31
2004-2010	SO4	75th Percentile	24.10	4.58	3.45	61.80	33.18	11.33	2.20	0.40	6.00
2011	SO4	75th Percentile	16.10	4.17	1.74	67.58	39.50	18.85	1.26	0.54	10.07
2004-2010	SO4	Count	56	42	47	73	52	50	29	37	60
2011	SO4	Count	5	3	3	12	4	3	2	3	6
2004-2010	TDEPTH	Mean	0.23	0.20	0.22	0.51	0.25	0.23	0.15	0.17	0.32
2011	TDEPTH	Mean	0.21	0.18	0.16	NA	0.25	0.19	0.12	0.14	0.26
2004-2010	TDEPTH	Standard Deviation	0.01	0.01	0.02	0.07	0.02	0.01	0.01	0.01	0.02
2011	TDEPTH	Standard Deviation	0.01	0.01	0.01	NA	0.00	0.01	0.00	0.01	0.01
2004-2010	TDEPTH	25th Percentile	0.15	0.13	0.12	0.41	0.17	0.14	0.08	0.09	0.25
2011	TDEPTH	25th Percentile	0.15	0.11	0.10	NA	0.22	0.15	0.10	0.09	0.17
2004-2010	TDEPTH	Median	0.21	0.19	0.18	0.50	0.23	0.19	0.15	0.15	0.30
2011	TDEPTH	Median	0.17	0.18	0.17	NA	0.25	0.19	0.13	0.15	0.26
2004-2010	TDEPTH	75th Percentile	0.31	0.28	0.30	0.50	0.35	0.32	0.20	0.22	0.40
2011	TDEPTH	75th Percentile	0.28	0.25	0.23	NA	0.27	0.23	0.16	0.20	0.29
2004-2010	TDEPTH	Count	58	51	55	6	57	56	49	56	66
2011	TDEPTH	Count	5	4	4	0	4	4	3	4	6
2004-2010	TDOC	Mean	29.31	22.92	26.25	29.82	29.68	24.41	24.30	22.87	20.54
2011	TDOC	Mean	29.05	34.00	35.20	71.18	35.83	31.90	NA	32.30	34.28
2004-2010	TDOC	Standard Deviation	39.31	19.90	23.95	45.21	46.93	35.14	28.95	16.39	12.22
2011	TDOC	Standard Deviation	9.25	0.72	0.32	21,536.05	17.34	0.02	NA	5.12	13.79
2004-2010	TDOC	25th Percentile	27.00	20.00	23.00	25.00	25.00	20.00	20.00	20.25	18.18
2011	TDOC	25th Percentile	27.98	33.70	35.00	27.08	33.45	31.85	NA	31.50	31.58
2004-2010	TDOC	Median	30.80	22.00	26.00	31.00	28.50	24.00	23.00	22.00	20.00
2011	TDOC	Median	29.05	34.00	35.20	30.20	34.00	31.90	NA	32.30	33.90
2004-2010	TDOC	75th Percentile	33.50	23.40	28.00	34.00	34.00	28.00	28.50	24.75	22.00
2011	TDOC	75th Percentile	30.13	34.30	35.40	33.08	37.30	31.95	NA	33.10	36.60
2004-2010	TDOC	Count	31	21	25	77	30	25	11	18	54
2011	TDOC	Count	2	2	2	12	3	2	0	2	4

PERIOD	STATION	STATISTIC	LOXA101	LOXA102	LOXA103	LOXA104	LOXA105	LOXA106	LOXA107	LOXA108	LOXA109
2004-2010	TDS	Mean	410.19	223.52	229.64	516.56	431.03	310.37	227.27	99.06	171.18
2011	TDS	Mean	478.50	241.00	205.00	477.98	437.67	361.50	NA	141.00	324.25
2004-2010	TDS	Standard Deviation	11,512.03	16,501.76	16,859.82	25,420.04	19,655.23	18,154.09	28,456.22	452.06	7,266.78
2011	TDS	Standard Deviation	2,380.50	32.00	8.00	28,990.95	8,380.33	840.50	NA	882.00	1,247.58
2004-2010	TDS	25th Percentile	342.50	146.00	130.00	402.50	312.50	194.50	135.00	84.00	110.00
2011	TDS	25th Percentile	461.25	239.00	204.00	423.50	397.50	351.25	NA	130.50	296.00
2004-2010	TDS	Median	410.00	184.00	218.00	526.50	430.00	290.00	162.00	99.50	143.00
2011	TDS	Median	478.50	241.00	205.00	502.00	457.00	361.50	NA	141.00	319.00
2004-2010	TDS	75th Percentile	509.00	252.00	269.00	625.75	550.00	414.50	285.00	107.75	209.00
2011	TDS	75th Percentile	495.75	243.00	206.00	567.75	487.50	371.75	NA	151.50	347.25
2004-2010	TDS	Count	31	21	25	78	31	27	11	18	55
2011	TDS	Count	2	2	2	12	3	2	0	2	4
2004-2010	TOC	Mean	30.58	23.68	27.10	29.92	29.58	24.39	24.23	23.32	20.69
2011	TOC	Mean	29.25	34.15	35.15	29.04	35.93	32.00	NA	32.70	34.80
2004-2010	TOC	Standard Deviation	33.19	54.02	51.06	43.58	50.90	30.56	28.87	15.97	12.49
2011	TOC	Standard Deviation	11.05	0.61	0.04	19.01	19.74	0.08	NA	4.50	12.01
2004-2010	TOC	25th Percentile	28.50	20.00	22.00	26.00	25.00	20.00	20.00	20.25	19.00
2011	TOC	25th Percentile	28.08	33.88	35.08	27.38	33.40	31.90	NA	31.95	32.18
2004-2010	TOC	Median	30.00	22.00	25.20	31.00	28.50	23.00	23.00	22.00	20.50
2011	TOC	Median	29.25	34.15	35.15	30.05	34.10	32.00	NA	32.70	34.40
2004-2010	TOC	75th Percentile	34.00	23.00	29.00	34.50	34.00	27.00	27.50	24.80	22.00
2011	TOC	75th Percentile	30.43	34.43	35.23	31.63	37.55	32.10	NA	33.45	37.03
2004-2010	TOC	Count	31	21	25	77	30	26	11	18	54
2011	TOC	Count	2	2	2	12	3	2	0	2	4
2004-2010	DO	Mean	3.10	3.94	2.75	4.91	3.16	3.43	2.95	4.99	3.33
2011	DO	Mean	2.44	3.91	3.40	5.85	1.58	4.12	4.10	6.44	2.77
2004-2010	DO	Standard Deviation	3.03	4.98	2.82	3.44	3.90	3.56	2.62	5.52	4.06
2011	DO	Standard Deviation	2.86	2.41	0.98	1.88	0.43	1.75	0.97	6.66	2.64
2004-2010	DO	25th Percentile	1.76	2.50	1.48	3.42	1.72	2.37	1.90	2.95	1.70
2011	DO	25th Percentile	1.21	3.28	2.91	5.07	1.30	3.51	3.75	5.54	1.91
2004-2010	DO	Median	2.81	3.68	2.33	5.13	2.51	3.13	2.58	4.94	2.79
2011	DO	Median	2.47	4.38	3.41	5.61	1.58	4.28	4.10	7.60	2.80
2004-2010	DO	75th Percentile	3.93	4.88	3.54	6.25	4.67	4.47	3.97	6.57	4.67
2011	DO	75th Percentile	3.70	4.78	3.90	6.69	1.86	4.82	4.44	7.92	2.80
2004-2010	DO	Count	54	40	45	76	53	50	31	40	60
2011	DO	Count	4	3	3	11	4	3	2	3	5

PERIOD	STATION	STATISTIC	LOXA101	LOXA102	LOXA103	LOXA104	LOXA105	LOXA106	LOXA107	LOXA108	LOXA109
2004-2010	OPO4	Mean	6.63	9.11	8.06	28.92	15.02	7.00	11.85	5.41	7.87
2011	OPO4	Mean	2.00	2.00	2.00	5.33	4.23	3.10	NA	2.00	2.83
2004-2010	OPO4	Standard Deviation	74.53	285.59	225.98	2,028.08	1,248.85	119.71	640.00	28.41	236.61
2011	OPO4	Standard Deviation	0.00	0.00	0.00	7.67	4.64	2.42	NA	0.00	2.72
2004-2010	OPO4	25th Percentile	3.00	3.00	3.00	4.60	3.00	3.00	3.00	3.00	3.00
2011	OPO4	25th Percentile	2.00	2.00	2.00	4.10	3.20	2.55	NA	2.00	2.00
2004-2010	OPO4	Median	3.50	4.45	4.70	9.50	3.60	3.00	4.60	3.50	3.00
2011	OPO4	Median	2.00	2.00	2.00	4.90	4.40	3.10	NA	2.00	2.00
2004-2010	OPO4	75th Percentile	6.25	6.85	7.00	32.00	7.50	6.00	5.50	5.75	5.60
2011	OPO4	75th Percentile	2.00	2.00	2.00	6.25	5.35	3.65	NA	2.00	2.83
2004-2010	OPO4	Count	28	16	21	66	27	23	11	14	45
2011	OPO4	Count	2	2	2	12	3	2	0	2	4
2004-2010	PH	Mean	7.13	6.84	6.84	7.65	7.03	6.91	6.64	6.68	6.75
2011	PH	Mean	6.98	6.95	6.97	7.64	6.83	7.29	6.61	7.00	6.55
2004-2010	PH	Standard Deviation	0.05	0.10	0.14	0.04	0.13	0.16	0.10	0.15	0.13
2011	PH	Standard Deviation	0.19	0.09	0.15	0.07	0.28	0.15	0.00	0.59	0.14
2004-2010	PH	25th Percentile	6.99	6.64	6.57	7.52	6.81	6.66	6.46	6.43	6.50
2011	PH	25th Percentile	6.62	6.77	6.75	7.55	6.72	7.07	6.61	6.56	6.24
2004-2010	PH	Median	7.13	6.80	6.77	7.64	7.00	6.87	6.57	6.58	6.67
2011	PH	Median	7.02	6.80	6.76	7.71	6.95	7.08	6.61	6.59	6.46
2004-2010	PH	75th Percentile	7.22	6.95	7.04	7.80	7.17	7.09	6.83	6.89	6.93
2011	PH	75th Percentile	7.04	7.05	7.09	7.81	7.06	7.41	6.62	7.24	6.75
2004-2010	PH	Count	55	41	46	78	54	51	32	39	63
2011	PH	Count	5	3	3	12	4	3	2	3	6
2004-2010	SPCOND	Mean	605.24	276.61	272.94	805.37	570.36	381.39	219.33	143.96	234.34
2011	SPCOND	Mean	740.54	291.00	218.47	851.18	594.75	482.20	330.05	163.80	369.40
2004-2010	SPCOND	Standard Deviation	37,412.80	26,176.03	28,729.07	57,507.79	54,606.54	34,585.76	22,117.66	2,089.72	16,207.05
2011	SPCOND	Standard Deviation	8,018.96	2,357.29	729.44	17,118.40	43,245.75	14,072.16	46,482.01	1,687.17	28,635.96
2004-2010	SPCOND	25th Percentile	440.93	187.38	162.95	662.45	391.53	232.10	152.68	110.50	148.65
2011	SPCOND	25th Percentile	700.60	266.60	207.50	775.30	461.25	426.00	253.83	142.40	231.45
2004-2010	SPCOND	Median	622.15	232.75	204.40	829.40	515.50	327.90	180.00	136.10	187.20
2011	SPCOND	Median	737.80	290.50	226.70	835.75	600.25	493.80	330.05	160.10	430.75
2004-2010	SPCOND	75th Percentile	749.38	292.95	331.35	956.95	768.93	482.40	214.43	170.00	276.70
2011	SPCOND	75th Percentile	778.90	315.15	233.55	925.53	733.75	544.20	406.28	183.35	490.78
2004-2010	SPCOND	Count	56	42	47	78	54	51	32	41	63
2011	SPCOND	Count	5	3	3	12	4	3	2	3	6

PERIOD	STATION	STATISTIC	LOXA101	LOXA102	LOXA103	LOXA104	LOXA105	LOXA106	LOXA107	LOXA108	LOXA109
2004-2010	TDP	Mean	13.44	8.29	8.50	72.78	31.22	12.00	7.67	8.25	5.88
2011	TDP	Mean	NA	NA	NA	NA	NA	NA	NA	NA	NA
2004-2010	TDP	Standard Deviation	97.78	10.57	7.14	3,277.72	3,220.94	114.00	1.33	16.25	2.52
2011	TDP	Standard Deviation	NA	NA	NA	NA	NA	NA	NA	NA	NA
2004-2010	TDP	25th Percentile	8.00	6.00	6.75	34.50	10.00	7.00	7.00	5.75	4.75
2011	TDP	25th Percentile	NA	NA	NA	NA	NA	NA	NA	NA	NA
2004-2010	TDP	Median	9.00	7.00	8.00	54.00	11.00	9.00	7.00	7.00	6.00
2011	TDP	Median	NA	NA	NA	NA	NA	NA	NA	NA	NA
2004-2010	TDP	75th Percentile	13.00	10.00	10.50	92.00	19.00	9.50	8.00	9.50	7.00
2011	TDP	75th Percentile	NA	NA	NA	NA	NA	NA	NA	NA	NA
2004-2010	TDP	Count	9	7	8	23	9	7	3	4	16
2011	TDP	Count	0	0	0	0	0	0	0	0	0
2004-2010	TEMP	Mean	22.56	22.21	21.60	25.11	22.90	23.09	22.73	24.08	23.61
2011	TEMP	Mean	22.99	24.21	23.83	25.61	23.22	23.35	21.65	25.34	21.43
2004-2010	TEMP	Standard Deviation	24.04	23.16	24.77	21.94	27.01	24.73	23.67	26.26	22.99
2011	TEMP	Standard Deviation	9.11	1.90	4.23	18.49	5.49	6.83	0.63	4.12	18.00
2004-2010	TEMP	25th Percentile	19.35	19.21	18.56	22.05	19.84	20.01	19.19	21.15	20.59
2011	TEMP	25th Percentile	21.63	23.62	23.17	22.30	21.66	21.88	21.37	24.73	18.45
2004-2010	TEMP	Median	23.20	21.86	21.95	25.65	23.03	24.15	23.12	24.30	24.14
2011	TEMP	Median	23.88	24.53	24.87	27.33	23.00	22.43	21.65	26.45	21.68
2004-2010	TEMP	75th Percentile	26.70	26.66	26.07	28.99	26.81	26.82	26.79	28.00	27.86
2011	TEMP	75th Percentile	24.93	24.97	25.02	29.02	24.56	24.37	21.93	26.52	24.73
2004-2010	TEMP	Count	56	42	47	78	54	51	32	41	63
2011	TEMP	Count	5	3	3	12	4	3	2	3	6
2004-2010	TN	Mean	1.52	1.02	1.14	1.98	1.55	1.15	1.14	1.28	1.09
2011	TN	Mean	1.54	1.64	1.59	1.74	1.74	1.64	NA	1.73	1.75
2004-2010	TN	Standard Deviation	0.15	0.21	0.18	0.38	0.37	0.21	0.16	0.10	0.08
2011	TN	Standard Deviation	0.01	0.00	0.01	0.06	0.03	0.00	NA	0.01	0.05
2004-2010	TN	25th Percentile	1.34	0.86	0.89	1.61	1.30	0.90	0.86	1.05	0.93
2011	TN	25th Percentile	1.51	1.63	1.56	1.66	1.66	1.63	NA	1.70	1.57
2004-2010	TN	Median	1.57	0.95	1.10	1.90	1.61	1.09	1.10	1.30	1.10
2011	TN	Median	1.54	1.64	1.59	1.82	1.78	1.64	NA	1.73	1.73
2004-2010	TN	75th Percentile	1.78	1.05	1.30	2.25	1.96	1.38	1.30	1.40	1.22
2011	TN	75th Percentile	1.56	1.64	1.63	1.91	1.84	1.66	NA	1.76	1.91
2004-2010	TN	Count	30	21	25	75	29	26	11	17	51
2011	TN	Count	2	2	2	10	3	2	0	2	4

PERIOD	STATION	STATISTIC	LOXA101	LOXA102	LOXA103	LOXA104	LOXA105	LOXA106	LOXA107	LOXA108	LOXA109
2004-2010	TP	Mean	14.86	9.19	10.81	57.64	21.62	11.35	10.51	7.46	9.30
2011	TP	Mean	19.32	11.43	10.47	28.79	23.78	14.60	7.70	6.07	13.12
2004-2010	TP	Standard Deviation	115.48	24.51	44.55	2,040.05	996.75	94.84	98.12	20.84	39.47
2011	TP	Standard Deviation	121.07	11.08	2.77	34.00	44.29	13.51	0.72	1.60	43.17
2004-2010	TP	25th Percentile	8.70	6.30	7.00	30.00	10.00	6.25	5.73	4.90	6.35
2011	TP	25th Percentile	13.00	10.35	9.80	24.13	19.48	12.55	7.40	5.50	8.33
2004-2010	TP	Median	12.00	8.80	9.80	41.50	16.30	9.70	7.95	6.50	8.00
2011	TP	Median	14.50	13.10	11.00	29.50	23.25	13.50	7.70	6.30	11.35
2004-2010	TP	75th Percentile	17.00	11.00	12.50	66.75	23.00	14.00	12.00	9.40	11.00
2011	TP	75th Percentile	18.10	13.35	11.40	32.28	27.55	16.10	8.00	6.75	16.25
2004-2010	TP	Count	55	41	47	78	53	51	32	41	62
2011	TP	Count	5	3	3	12	4	3	2	3	6
2004-2010	TSS	Mean	2.11	1.87	2.32	4.20	2.15	1.85	2.50	2.63	2.01
2011	TSS	Mean	4.20	2.50	2.50	2.57	2.50	2.50	2.50	2.78	2.78
2004-2010	TSS	Standard Deviation	1.33	0.91	2.44	7.63	3.49	1.00	14.37	2.36	2.48
2011	TSS	Standard Deviation	6.95	0.00	0.00	0.06	0.00	0.00	0.00	0.24	0.19
2004-2010	TSS	25th Percentile	1.60	1.58	1.60	2.50	1.00	1.00	1.50	1.60	1.50
2011	TSS	25th Percentile	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50
2004-2010	TSS	Median	2.00	1.60	1.60	3.50	1.60	1.60	1.60	2.50	1.60
2011	TSS	Median	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50
2004-2010	TSS	75th Percentile	2.55	2.00	2.85	5.00	2.50	2.50	2.50	3.00	2.50
2011	TSS	75th Percentile	5.00	2.50	2.50	2.50	2.50	2.50	2.50	2.93	3.14
2004-2010	TSS	Count	44	32	35	78	45	41	24	32	57
2011	TSS	Count	5	3	3	12	4	3	2	3	6
2004-2010	DEPTH	Mean	0.16	0.16	0.17	0.43	0.19	0.16	0.16	0.15	0.20
2011	DEPTH	Mean	0.10	0.09	0.08	NA	0.12	0.10	0.06	0.07	0.13
2004-2010	DEPTH	Standard Deviation	0.04	0.05	0.05	0.03	0.04	0.04	0.06	0.05	0.03
2011	DEPTH	Standard Deviation	0.00	0.00	0.00	NA	0.00	0.00	0.00	0.00	0.00
2004-2010	DEPTH	25th Percentile	0.08	0.07	0.07	0.50	0.09	0.07	0.06	0.06	0.13
2011	DEPTH	25th Percentile	0.07	0.05	0.05	NA	0.11	0.07	0.05	0.05	0.08
2004-2010	DEPTH	Median	0.11	0.10	0.12	0.50	0.14	0.12	0.08	0.09	0.16
2011	DEPTH	Median	0.09	0.09	0.08	NA	0.13	0.10	0.07	0.08	0.13
2004-2010	DEPTH	75th Percentile	0.16	0.15	0.17	0.50	0.20	0.16	0.12	0.14	0.21
2011	DEPTH	75th Percentile	0.14	0.12	0.11	NA	0.14	0.12	0.08	0.10	0.15
2004-2010	DEPTH	Count	42	33	34	22	40	40	26	34	46
2011	DEPTH	Count	5	4	4	0	4	4	3	4	6

PERIOD	STATION	STATISTIC	LOXA110	LOXA111	LOXA112	LOXA113	LOXA114	LOXA115	LOXA116	LOXA117	LOXA118
2004-2010	ALK	Mean	24.74	28.76	45.21	23.69	19.91	181.17	168.50	99.77	48.54
2011	ALK	Mean	15.70	33.67	59.63	25.77	18.60	174.08		136.25	88.93
2004-2010	ALK	Standard Deviation	55.33	105.96	431.10	72.08	47.70	2,905.73	3,802.74	1,887.18	671.99
2011	ALK	Standard Deviation	0.72	46.74	801.84	0.36	5.12	585.17		349.58	893.25
2004-2010	ALK	25th Percentile	20.00	22.15	34.00	16.38	14.00	140.00	140.50	70.00	30.00
2011	ALK	25th Percentile	15.40	29.75	35.58	25.45	17.80	156.75		122.25	71.23
2004-2010	ALK	Median	23.50	28.00	40.00	23.00	18.00	183.00	175.50	97.00	40.00
2011	ALK	Median	15.70	30.60	57.40	25.70	18.60	167.50		136.00	90.05
2004-2010	ALK	75th Percentile	28.00	34.50	51.75	29.00	26.00	214.50	216.00	121.00	62.25
2011	ALK	75th Percentile	16.00	36.05	81.45	26.05	19.40	189.25		150.00	107.75
2004-2010	ALK	Count	24	34	46	32	35	78	34	43	56
2011	ALK	Count	2	3	4	3	2	12		4	4
2004-2010	CA	Mean	7.26	8.63	13.46	7.06	6.28	59.47	55.35	31.87	14.90
2011	CA	Mean	13.60	11.73	23.50	10.83	8.90	54.96		44.45	31.80
2004-2010	CA	Standard Deviation	2.95	10.98	38.30	4.81	2.03	376.32	489.49	229.18	63.18
2011	CA	Standard Deviation	0.72	17.54	45.77	3.86	1.13	129.45		40.74	30.61
2004-2010	CA	25th Percentile	6.24	6.55	10.13	5.52	5.10	45.03	43.00	21.40	9.30
2011	CA	25th Percentile	13.30	10.14	17.68	9.89	8.53	46.93		40.95	28.38
2004-2010	CA	Median	6.80	8.36	11.05	6.60	6.20	58.55	53.30	30.00	12.00
2011	CA	Median	13.60	13.30	23.30	11.00	8.90	50.70		45.65	32.10
2004-2010	CA	75th Percentile	7.68	10.35	15.60	8.43	7.25	72.70	70.40	41.65	19.23
2011	CA	75th Percentile	13.90	14.10	29.13	11.85	9.28	61.63		49.15	35.53
2004-2010	CA	Count	24	34	46	32	35	78	33	43	56
2011	CA	Count	2	3	4	3	2	12		4	4
2004-2010	CL	Mean	21.36	17.85	25.63	18.71	17.89	102.02	88.11	55.74	26.99
2011	CL	Mean	48.15	29.81	75.23	26.92	23.92	143.50		94.83	72.70
2004-2010	CL	Standard Deviation	33.59	67.77	265.67	61.26	29.31	1,594.29	1,616.58	1,145.73	269.72
2011	CL	Standard Deviation	95.06	125.94	597.68	94.22	23.92	795.55		955.97	1,520.24
2004-2010	CL	25th Percentile	16.30	12.53	16.00	13.00	14.33	70.00	67.65	29.00	15.75
2011	CL	25th Percentile	41.48	22.65	55.18	21.10	22.10	123.00		68.05	39.45
2004-2010	CL	Median	20.50	17.00	19.60	17.00	17.05	108.00	93.60	51.30	21.00
2011	CL	Median	46.95	23.80	75.25	23.30	22.30	134.00		103.90	91.00
2004-2010	CL	75th Percentile	25.05	21.63	30.30	21.75	21.00	140.00	110.00	78.50	36.55
2011	CL	75th Percentile	53.63	35.35	95.30	30.30	23.00	179.00		121.00	101.75
2004-2010	CL	Count	48	52	58	58	56	77	34	59	64
2011	CL	Count	4	7	4	5	5	12		6	6

PERIOD	STATION	STATISTIC	LOXA110	LOXA111	LOXA112	LOXA113	LOXA114	LOXA115	LOXA116	LOXA117	LOXA118
2004-2010	DCS	Mean	0.29	0.36	0.40	0.36	0.36	1.00	0.84	0.85	0.43
2011	DCS	Mean	0.14	0.24	0.21	0.19	0.24	1.00		0.22	0.24
2004-2010	DCS	Standard Deviation	0.02	0.02	0.03	0.02	0.02	0.00	0.04	15.22	0.02
2011	DCS	Standard Deviation	0.00	0.01	0.01	0.00	0.00	0.00		0.01	0.01
2004-2010	DCS	25th Percentile	0.20	0.29	0.32	0.28	0.26	1.00	0.73	0.31	0.33
2011	DCS	25th Percentile	0.09	0.23	0.09	0.17	0.21	1.00		0.17	0.18
2004-2010	DCS	Median	0.28	0.35	0.41	0.35	0.34	1.00	0.86	0.39	0.44
2011	DCS	Median	0.14	0.23	0.28	0.18	0.22	1.00		0.27	0.26
2004-2010	DCS	75th Percentile	0.38	0.45	0.52	0.45	0.45	1.00	0.96	0.50	0.54
2011	DCS	75th Percentile	0.18	0.23	0.29	0.22	0.28	1.00		0.28	0.34
2004-2010	DCS	Count	65	67	69	71	69	35	35	70	74
2011	DCS	Count	4	5	5	5	5	9		5	6
2004-2010	NA	Mean	16.94	15.89	23.50	14.01	12.14	79.68	60.21	56.83	28.45
2011	NA	Mean	NA	NA	NA	NA	NA	NA		NA	NA
2004-2010	NA	Standard Deviation	18.74	82.54	197.48	37.31	9.25	550.76	814.79	487.05	230.02
2011	NA	Standard Deviation	NA	NA	NA	NA	NA	NA		NA	NA
2004-2010	NA	25th Percentile	13.10	11.00	16.75	10.90	10.18	62.30	46.20	36.30	20.15
2011	NA	25th Percentile	NA	NA	NA	NA	NA	NA		NA	NA
2004-2010	NA	Median	15.80	14.20	21.10	13.40	12.35	80.40	52.20	58.90	22.30
2011	NA	Median	NA	NA	NA	NA	NA	NA		NA	NA
2004-2010	NA	75th Percentile	21.20	16.90	24.50	13.85	13.40	98.43	73.55	72.95	39.10
2011	NA	75th Percentile	NA	NA	NA	NA	NA	NA		NA	NA
2004-2010	NA	Count	5	9	11	7	8	18	15	7	11
2011	NA	Count	0	0	0	0	0	0		0	0
2004-2010	SIO2	Mean	6.21	5.66	6.76	5.10	4.61	15.50	15.68	13.81	9.35
2011	SIO2	Mean	3.16	6.32	13.01	6.73	5.24	15.39		19.73	16.48
2004-2010	SIO2	Standard Deviation	17.21	16.90	18.11	13.64	10.85	62.47	53.91	53.51	33.72
2011	SIO2	Standard Deviation	2.18	22.91	19.78	1.77	1.57	43.45		12.61	14.73
2004-2010	SIO2	25th Percentile	3.99	3.15	4.00	2.75	2.25	10.00	9.36	7.85	5.05
2011	SIO2	25th Percentile	2.63	4.13	10.36	6.17	4.79	7.82		18.18	15.43
2004-2010	SIO2	Median	5.07	4.55	6.29	4.46	3.84	15.00	16.70	13.80	7.60
2011	SIO2	Median	3.16	7.05	13.65	7.08	5.24	17.60		19.75	17.55
2004-2010	SIO2	75th Percentile	8.93	6.72	8.45	6.12	5.65	21.00	22.80	19.30	12.50
2011	SIO2	75th Percentile	3.68	8.88	16.30	7.47	5.68	20.53		21.30	18.60
2004-2010	SIO2	Count	24	34	46	32	35	77	33	43	55
2011	SIO2	Count	2	3	4	3	2	12		4	4

PERIOD	STATION	STATISTIC	LOXA110	LOXA111	LOXA112	LOXA113	LOXA114	LOXA115	LOXA116	LOXA117	LOXA118
2004-2010	SO4	Mean	0.59	1.13	2.56	0.56	0.27	47.39	33.03	13.21	3.75
2011	SO4	Mean	5.00	0.80	8.69	0.66	0.54	61.17		21.79	10.38
2004-2010	SO4	Standard Deviation	0.41	7.33	20.61	0.60	0.06	639.79	587.25	196.24	20.61
2011	SO4	Standard Deviation	31.93	0.03	26.74	0.02	0.00	82.21		231.87	88.24
2004-2010	SO4	25th Percentile	0.29	0.40	0.70	0.28	0.05	27.00	14.70	3.33	0.96
2011	SO4	25th Percentile	1.48	0.70	5.18	0.56	0.51	53.83		9.94	2.88
2004-2010	SO4	Median	0.45	0.57	1.25	0.42	0.20	46.00	23.60	7.95	2.60
2011	SO4	Median	2.68	0.81	8.01	0.67	0.52	61.25		25.15	10.47
2004-2010	SO4	75th Percentile	0.60	0.80	2.45	0.59	0.49	67.00	50.75	16.83	5.10
2011	SO4	75th Percentile	6.19	0.86	11.53	0.67	0.55	68.58		27.93	13.60
2004-2010	SO4	Count	49	53	58	56	47	77	34	60	65
2011	SO4	Count	4	7	4	5	5	12		6	6
2004-2010	TDEPTH	Mean	0.20	0.24	0.27	0.23	0.23	0.70	0.48	0.54	0.31
2011	TDEPTH	Mean	0.24	0.18	0.25	0.23	0.22	NA		0.25	0.26
2004-2010	TDEPTH	Standard Deviation	0.01	0.01	0.02	0.02	0.01	0.18	0.08	4.32	0.02
2011	TDEPTH	Standard Deviation	0.00	0.01	0.00	0.01	0.01	NA		0.02	0.02
2004-2010	TDEPTH	25th Percentile	0.13	0.17	0.18	0.16	0.15	0.55	0.30	0.19	0.21
2011	TDEPTH	25th Percentile	0.19	0.13	0.23	0.15	0.15	NA		0.19	0.17
2004-2010	TDEPTH	Median	0.19	0.20	0.27	0.19	0.21	0.70	0.42	0.29	0.29
2011	TDEPTH	Median	0.22	0.19	0.25	0.21	0.19	NA		0.26	0.30
2004-2010	TDEPTH	75th Percentile	0.27	0.32	0.35	0.30	0.31	0.85	0.63	0.37	0.43
2011	TDEPTH	75th Percentile	0.27	0.24	0.27	0.30	0.28	NA		0.34	0.37
2004-2010	TDEPTH	Count	59	63	67	68	67	2	33	65	71
2011	TDEPTH	Count	4	7	4	5	5	0		7	7
2004-2010	TDOC	Mean	18.78	15.87	18.02	16.07	16.78	29.34	28.78	24.40	18.04
2011	TDOC	Mean	33.30	24.30	31.80	27.77	28.70	78.71		33.03	36.88
2004-2010	TDOC	Standard Deviation	8.46	9.88	11.69	10.33	10.19	63.70	34.37	34.14	12.09
2011	TDOC	Standard Deviation	6.48	63.57	9.95	7.32	12.50	26,035.11		10.48	47.92
2004-2010	TDOC	25th Percentile	17.00	14.00	16.00	14.00	15.00	23.00	25.75	20.00	15.53
2011	TDOC	25th Percentile	32.40	21.85	29.25	26.25	27.45	30.78		31.35	31.13
2004-2010	TDOC	Median	19.00	16.00	17.00	16.00	16.00	29.85	30.00	23.00	18.00
2011	TDOC	Median	33.30	28.60	31.70	26.90	28.70	32.70		32.05	35.95
2004-2010	TDOC	75th Percentile	21.00	17.00	20.00	17.00	18.50	34.25	32.25	29.00	19.75
2011	TDOC	75th Percentile	34.20	28.90	34.25	28.85	29.95	34.73		33.73	41.70
2004-2010	TDOC	Count	23	33	45	31	35	76	32	41	54
2011	TDOC	Count	2	3	4	3	2	12		4	4

PERIOD	STATION	STATISTIC	LOXA110	LOXA111	LOXA112	LOXA113	LOXA114	LOXA115	LOXA116	LOXA117	LOXA118
2004-2010	TDS	Mean	103.17	97.76	135.07	83.91	84.97	485.72	445.56	284.23	142.57
2011	TDS	Mean	204.00	151.00	255.00	146.00	117.00	537.73		460.00	339.50
2004-2010	TDS	Standard Deviation	763.01	1,895.09	4,289.75	766.41	686.91	28,967.71	37,693.95	20,754.14	5,156.18
2011	TDS	Standard Deviation	288.00	3,187.00	3,492.67	441.00	3,200.00	28,846.29		2,558.00	2,783.00
2004-2010	TDS	25th Percentile	86.25	66.00	100.00	65.25	64.50	355.00	341.25	165.00	97.00
2011	TDS	25th Percentile	198.00	128.00	227.25	135.50	97.00	512.00		425.25	312.75
2004-2010	TDS	Median	110.00	91.00	120.00	82.00	87.00	488.00	450.00	249.00	115.00
2011	TDS	Median	204.00	168.00	234.00	146.00	117.00	595.00		459.50	344.50
2004-2010	TDS	75th Percentile	120.00	112.75	151.50	93.25	100.00	610.00	560.00	385.00	172.50
2011	TDS	75th Percentile	210.00	182.50	261.75	156.50	137.00	623.50		494.25	371.25
2004-2010	TDS	Count	24	34	46	32	35	78	34	43	56
2011	TDS	Count	2	3	4	3	2	12		4	4
2004-2010	TOC	Mean	19.07	15.90	18.13	16.04	16.98	28.95	29.00	24.71	18.16
2011	TOC	Mean	33.10	24.30	32.08	27.97	29.20	32.57		33.38	36.83
2004-2010	TOC	Standard Deviation	9.19	9.05	11.30	8.53	9.19	47.60	39.38	32.22	11.88
2011	TOC	Standard Deviation	5.78	66.31	7.95	6.24	16.82	8.37		11.73	57.73
2004-2010	TOC	25th Percentile	17.65	14.00	16.00	14.00	15.00	24.00	26.00	21.00	16.00
2011	TOC	25th Percentile	32.25	21.85	29.68	26.60	27.75	30.83		32.00	30.53
2004-2010	TOC	Median	19.00	16.00	18.00	16.00	16.00	30.00	30.00	24.00	18.00
2011	TOC	Median	33.10	28.80	31.90	27.40	29.20	33.00		32.75	35.75
2004-2010	TOC	75th Percentile	21.00	18.00	20.00	17.00	19.00	34.00	33.00	29.00	20.00
2011	TOC	75th Percentile	33.95	29.00	34.30	29.05	30.65	35.08		34.13	42.05
2004-2010	TOC	Count	23	33	45	31	35	76	33	41	54
2011	TOC	Count	2	3	4	3	2	12		4	4
2004-2010	DO	Mean	5.55	4.29	3.41	4.40	3.80	4.73	1.35	2.37	3.40
2011	DO	Mean	5.11	4.61	2.83	5.39	5.05	5.82		1.31	2.49
2004-2010	DO	Standard Deviation	4.97	3.78	2.96	3.88	4.53	3.70	0.59	4.56	10.55
2011	DO	Standard Deviation	3.04	1.52	0.67	0.27	0.70	2.17		0.39	0.32
2004-2010	DO	25th Percentile	3.84	3.01	2.21	3.05	2.29	3.57	0.67	1.13	2.02
2011	DO	25th Percentile	4.11	3.82	2.44	4.95	4.48	5.36		0.82	2.07
2004-2010	DO	Median	5.18	3.78	2.80	4.00	3.40	4.49	1.35	1.60	2.92
2011	DO	Median	5.14	4.74	2.52	5.38	5.06	5.90		1.29	2.56
2004-2010	DO	75th Percentile	6.97	5.38	4.69	5.47	4.94	6.04	1.90	2.68	3.71
2011	DO	75th Percentile	6.13	5.02	2.92	5.82	5.63	6.67		1.56	3.00
2004-2010	DO	Count	50	53	58	59	59	73	32	57	63
2011	DO	Count	4	6	4	4	4	11		5	5

PERIOD	STATION	STATISTIC	LOXA110	LOXA111	LOXA112	LOXA113	LOXA114	LOXA115	LOXA116	LOXA117	LOXA118
2004-2010	OPO4	Mean	7.96	5.00	8.15	5.56	5.99	24.53	20.08	8.88	6.43
2011	OPO4	Mean	2.00	1.67	2.48	2.00	2.00	5.15		5.08	3.85
2004-2010	OPO4	Standard Deviation	172.54	54.95	268.20	64.20	115.25	1,287.06	1,072.16	230.50	118.63
2011	OPO4	Standard Deviation	0.00	0.33	1.70	0.00	0.00	9.73		0.32	2.62
2004-2010	OPO4	25th Percentile	3.00	2.78	3.00	2.90	3.00	5.00	4.00	3.00	3.00
2011	OPO4	25th Percentile	2.00	1.50	1.88	2.00	2.00	3.05		4.70	3.45
2004-2010	OPO4	Median	3.70	3.00	3.00	3.00	3.00	12.00	7.00	3.70	3.40
2011	OPO4	Median	2.00	2.00	2.00	2.00	2.00	4.40		4.85	4.40
2004-2010	OPO4	75th Percentile	6.00	4.98	4.60	5.03	4.00	19.00	13.00	7.13	5.00
2011	OPO4	75th Percentile	2.00	2.00	2.60	2.00	2.00	7.40		5.23	4.80
2004-2010	OPO4	Count	21	30	41	28	30	69	29	36	47
2011	OPO4	Count	2	3	4	3	2	12		4	4
2004-2010	PH	Mean	6.83	6.73	6.76	6.80	6.71	7.60	7.10	6.79	6.67
2011	PH	Mean	6.75	6.55	6.73	6.64	6.60	7.56		6.77	6.69
2004-2010	PH	Standard Deviation	0.22	0.29	0.19	0.29	0.24	0.06	0.05	0.12	0.17
2011	PH	Standard Deviation	1.07	0.22	0.21	0.29	0.47	0.15		0.11	0.12
2004-2010	PH	25th Percentile	6.54	6.36	6.50	6.44	6.36	7.48	6.96	6.58	6.41
2011	PH	25th Percentile	6.35	6.22	6.65	6.27	6.34	7.46		6.50	6.50
2004-2010	PH	Median	6.70	6.50	6.65	6.66	6.56	7.64	7.16	6.79	6.62
2011	PH	Median	6.70	6.67	6.89	6.64	6.40	7.66		6.72	6.67
2004-2010	PH	75th Percentile	7.02	6.85	6.94	7.01	7.02	7.76	7.23	6.97	6.86
2011	PH	75th Percentile	7.10	6.73	6.97	6.67	6.58	7.80		6.95	6.89
2004-2010	PH	Count	52	55	61	62	62	75	33	59	64
2011	PH	Count	4	7	4	5	5	12		6	6
2004-2010	SPCOND	Mean	124.80	125.28	186.41	121.81	115.42	760.09	682.02	395.64	199.64
2011	SPCOND	Mean	230.63	164.24	403.45	148.58	133.64	917.48		593.72	420.55
2004-2010	SPCOND	Standard Deviation	953.11	2,724.78	12,043.08	2,178.57	1,443.10	68,263.15	79,140.89	47,629.44	12,156.57
2011	SPCOND	Standard Deviation	660.25	1,982.95	20,294.46	1,436.20	296.23	12,763.36		40,693.66	42,156.13
2004-2010	SPCOND	25th Percentile	104.60	94.50	121.30	90.50	90.10	552.85	555.60	202.80	123.20
2011	SPCOND	25th Percentile	224.15	138.65	281.70	123.10	124.50	837.45		427.05	248.10
2004-2010	SPCOND	Median	124.70	112.80	148.60	111.70	113.00	768.20	699.50	367.00	151.60
2011	SPCOND	Median	238.25	145.50	399.80	135.90	128.20	923.95		643.80	494.40
2004-2010	SPCOND	75th Percentile	139.85	147.13	225.50	136.60	126.70	965.65	860.50	515.55	268.13
2011	SPCOND	75th Percentile	244.73	190.85	521.55	167.60	132.70	1,006.50		760.05	571.35
2004-2010	SPCOND	Count	51	54	61	61	61	75	33	59	64
2011	SPCOND	Count	4	7	4	5	5	12		6	6

PERIOD	STATION	STATISTIC	LOXA110	LOXA111	LOXA112	LOXA113	LOXA114	LOXA115	LOXA116	LOXA117	LOXA118
2004-2010	TDP	Mean	6.20	5.78	5.85	5.71	5.38	59.61	21.58	9.00	5.46
2011	TDP	Mean	NA	NA	NA	NA	NA	NA	NA	NA	NA
2004-2010	TDP	Standard Deviation	1.70	1.94	2.81	0.57	0.55	2,565.61	1,171.26	5.00	1.27
2011	TDP	Standard Deviation	NA	NA	NA	NA	NA	NA	NA	NA	NA
2004-2010	TDP	25th Percentile	5.00	5.00	4.00	5.00	5.00	20.50	11.00	8.00	5.00
2011	TDP	25th Percentile	NA	NA	NA	NA	NA	NA	NA	NA	NA
2004-2010	TDP	Median	6.00	6.00	6.00	6.00	5.50	38.00	13.00	10.00	6.00
2011	TDP	Median	NA	NA	NA	NA	NA	NA	NA	NA	NA
2004-2010	TDP	75th Percentile	7.00	7.00	7.00	6.00	6.00	82.50	16.50	10.00	6.00
2011	TDP	75th Percentile	NA	NA	NA	NA	NA	NA	NA	NA	NA
2004-2010	TDP	Count	5	9	13	7	8	23	19	7	13
2011	TDP	Count	0	0	0	0	0	0	0	0	0
2004-2010	TEMP	Mean	23.97	23.24	23.54	23.65	23.53	24.91	22.87	22.11	23.20
2011	TEMP	Mean	24.73	21.24	24.22	22.74	22.79	25.64	22.58	22.58	23.48
2004-2010	TEMP	Standard Deviation	24.85	23.64	24.57	24.60	21.50	17.59	15.79	24.57	24.06
2011	TEMP	Standard Deviation	11.18	24.32	12.74	33.35	37.42	16.56	6.21	7.81	7.81
2004-2010	TEMP	25th Percentile	20.94	20.66	20.40	20.49	20.54	22.20	19.73	18.63	20.20
2011	TEMP	25th Percentile	22.15	18.14	21.28	20.16	20.38	22.14	20.91	20.91	21.27
2004-2010	TEMP	Median	25.17	23.99	24.26	24.42	24.68	25.58	22.44	22.38	22.66
2011	TEMP	Median	24.50	21.60	24.25	21.68	21.43	27.61	21.40	21.40	22.78
2004-2010	TEMP	75th Percentile	27.61	27.29	27.80	27.20	27.17	28.46	26.54	26.00	27.31
2011	TEMP	75th Percentile	27.08	24.08	27.18	27.65	28.16	29.10	24.53	24.53	25.57
2004-2010	TEMP	Count	52	55	61	62	62	76	34	59	65
2011	TEMP	Count	4	7	4	5	5	12	6	6	6
2004-2010	TN	Mean	1.07	0.85	1.01	0.90	0.94	1.85	1.90	1.14	0.89
2011	TN	Mean	1.84	1.48	1.69	1.61	1.42	1.84	1.71	1.71	1.81
2004-2010	TN	Standard Deviation	0.13	0.12	0.07	0.07	0.09	0.45	0.49	0.18	0.07
2011	TN	Standard Deviation	0.01	0.00	0.08	0.04	0.05	0.03	0.00	0.00	0.12
2004-2010	TN	25th Percentile	0.93	0.70	0.89	0.79	0.80	1.48	1.60	0.86	0.76
2011	TN	25th Percentile	1.80	1.47	1.48	1.55	1.34	1.78	1.66	1.66	1.55
2004-2010	TN	Median	1.16	0.84	1.00	0.89	0.92	1.81	2.00	1.04	0.89
2011	TN	Median	1.84	1.48	1.64	1.72	1.42	1.82	1.70	1.70	1.83
2004-2010	TN	75th Percentile	1.21	1.00	1.10	1.10	1.11	2.11	2.22	1.34	1.02
2011	TN	75th Percentile	1.87	1.49	1.85	1.73	1.49	1.89	1.75	1.75	2.09
2004-2010	TN	Count	23	34	44	32	34	75	33	40	52
2011	TN	Count	2	2	4	3	2	10	4	4	4

PERIOD	STATION	STATISTIC	LOXA110	LOXA111	LOXA112	LOXA113	LOXA114	LOXA115	LOXA116	LOXA117	LOXA118
2004-2010	TP	Mean	8.57	7.55	8.74	7.40	7.41	48.52	57.97	15.20	9.05
2011	TP	Mean	8.08	19.20	11.00	6.80	7.04	28.08		19.48	12.20
2004-2010	TP	Standard Deviation	43.03	38.87	22.90	31.08	54.54	1,594.87	1,880.91	132.92	66.68
2011	TP	Standard Deviation	11.78	336.42	1.18	2.41	1.68	56.99		48.17	15.30
2004-2010	TP	25th Percentile	5.23	3.70	5.98	4.33	4.03	26.00	24.00	9.40	5.90
2011	TP	25th Percentile	6.05	8.20	10.33	7.10	6.60	22.13		14.55	9.45
2004-2010	TP	Median	7.25	6.00	8.00	6.10	5.80	34.00	47.00	12.00	7.30
2011	TP	Median	6.80	8.90	10.95	7.20	7.40	26.85		18.05	11.95
2004-2010	TP	75th Percentile	10.00	9.00	11.40	9.00	7.98	52.75	80.00	18.00	9.90
2011	TP	75th Percentile	8.83	25.50	11.63	7.60	8.10	32.45		24.93	14.83
2004-2010	TP	Count	50	54	60	60	58	78	35	61	66
2011	TP	Count	4	7	4	5	5	12		6	6
2004-2010	TSS	Mean	2.29	2.98	2.27	2.35	2.38	4.14	9.90	1.91	2.78
2011	TSS	Mean	2.50	7.29	2.50	2.67	2.50	2.57		3.50	3.50
2004-2010	TSS	Standard Deviation	2.29	16.63	1.59	2.29	3.76	25.68	150.09	0.84	30.61
2011	TSS	Standard Deviation	0.00	160.32	0.00	0.14	0.00	0.06		6.00	6.00
2004-2010	TSS	25th Percentile	1.60	1.38	1.60	1.60	1.55	2.00	1.60	1.38	1.60
2011	TSS	25th Percentile	2.50	2.50	2.50	2.50	2.50	2.50		2.50	2.50
2004-2010	TSS	Median	2.00	2.05	2.00	2.25	2.00	3.00	4.00	1.60	1.60
2011	TSS	Median	2.50	2.50	2.50	2.50	2.50	2.50		2.50	2.50
2004-2010	TSS	75th Percentile	2.50	3.00	2.50	2.55	2.50	5.00	11.00	2.50	2.50
2011	TSS	75th Percentile	2.50	2.50	2.50	2.50	2.50	2.50		2.50	2.50
2004-2010	TSS	Count	40	44	55	44	47	77	33	44	55
2011	TSS	Count	4	7	4	5	5	12		6	6
2004-2010	DEPTH	Mean	0.16	0.17	0.19	0.18	0.16	0.44	0.40	0.20	0.20
2011	DEPTH	Mean	0.12	0.10	0.12	0.11	0.10	NA		0.14	0.15
2004-2010	DEPTH	Standard Deviation	0.04	0.04	0.04	0.04	0.04	0.03	0.10	0.04	0.03
2011	DEPTH	Standard Deviation	0.00	0.00	0.00	0.00	0.00	NA		0.00	0.00
2004-2010	DEPTH	25th Percentile	0.07	0.09	0.11	0.09	0.08	0.50	0.16	0.12	0.13
2011	DEPTH	25th Percentile	0.09	0.08	0.11	0.07	0.07	NA		0.10	0.11
2004-2010	DEPTH	Median	0.10	0.12	0.14	0.11	0.12	0.50	0.27	0.16	0.16
2011	DEPTH	Median	0.11	0.09	0.12	0.10	0.09	NA		0.14	0.15
2004-2010	DEPTH	75th Percentile	0.16	0.18	0.18	0.19	0.16	0.50	0.50	0.21	0.21
2011	DEPTH	75th Percentile	0.14	0.12	0.13	0.15	0.14	NA		0.18	0.20
2004-2010	DEPTH	Count	41	45	45	47	46	27	15	42	46
2011	DEPTH	Count	4	7	4	5	5	0		6	6

PERIOD	STATION	STATISTIC	LOXA119	LOXA120	LOXA121	LOXA122	LOXA123	LOXA124	LOXA126	LOXA127	LOXA128
2004-2010	ALK	Mean	30.08	21.27	204.00	126.35	131.78	37.09	82.77	21.51	17.74
2011	ALK	Mean	33.28	19.02		151.50		97.20	122.10	12.25	14.20
2004-2010	ALK	Standard Deviation	91.44	53.40	536.50	2,966.32	1,998.19	230.46	1,744.85	104.73	121.01
2011	ALK	Standard Deviation	55.38	8.65		651.00		NA	1,816.30	0.24	0.98
2004-2010	ALK	25th Percentile	25.00	15.00	193.00	95.50	112.00	26.00	50.75	14.80	12.95
2011	ALK	25th Percentile	29.50	16.45		130.75		97.20	107.00	12.08	13.85
2004-2010	ALK	Median	28.00	20.00	200.00	120.00	119.00	35.00	70.50	20.00	15.00
2011	ALK	Median	31.60	18.75		152.00		97.20	124.00	12.25	14.20
2004-2010	ALK	75th Percentile	37.75	27.00	216.00	160.00	133.00	42.00	110.75	24.00	19.25
2011	ALK	75th Percentile	33.40	21.05		172.75		97.20	149.00	12.43	14.55
2004-2010	ALK	Count	54	65	5	48	9	53	52	41	28
2011	ALK	Count	5	6		4		1	5	2	2
2004-2010	CA	Mean	8.65	6.52	67.10	39.82	40.71	13.95	27.94	8.11	5.60
2011	CA	Mean	12.44	7.39		52.85		35.40	43.10	7.63	7.45
2004-2010	CA	Standard Deviation	3.14	3.83	84.43	341.86	235.83	24.67	231.44	10.83	0.99
2011	CA	Standard Deviation	2.75	1.80		90.68		NA	356.74	0.90	1.64
2004-2010	CA	25th Percentile	7.55	5.32	65.80	26.00	34.33	10.70	15.00	6.56	4.75
2011	CA	25th Percentile	12.70	6.22		47.78		35.40	31.40	7.30	6.99
2004-2010	CA	Median	8.20	6.00	67.70	41.05	36.00	13.30	23.50	7.62	5.40
2011	CA	Median	12.80	7.55		55.25		35.40	42.10	7.63	7.45
2004-2010	CA	75th Percentile	9.70	7.70	73.10	51.48	39.28	16.00	37.25	9.20	6.60
2011	CA	75th Percentile	13.10	8.37		60.33		35.40	57.00	7.97	7.90
2004-2010	CA	Count	55	65	5	48	10	53	52	41	28
2011	CA	Count	5	6		4		1	5	2	2
2004-2010	CL	Mean	18.00	23.75	100.49	57.68	64.65	29.47	53.73	23.81	19.16
2011	CL	Mean	30.42	30.60		78.90		69.82	87.55	22.76	24.40
2004-2010	CL	Standard Deviation	34.51	116.63	1,608.60	1,022.99	857.88	153.38	843.32	84.79	36.88
2011	CL	Standard Deviation	47.83	113.26		759.21		1,129.31	530.76	25.38	17.01
2004-2010	CL	25th Percentile	13.08	16.50	78.33	30.00	59.60	20.25	30.00	17.50	15.00
2011	CL	25th Percentile	26.23	26.10		56.45		39.68	69.25	17.70	22.60
2004-2010	CL	Median	17.00	21.00	97.50	57.00	66.00	26.60	47.00	22.00	19.25
2011	CL	Median	32.50	28.25		76.30		81.00	90.65	24.50	25.30
2004-2010	CL	75th Percentile	21.00	27.00	124.50	80.00	66.70	33.75	75.28	29.05	22.75
2011	CL	75th Percentile	35.33	33.80		96.38		97.50	106.13	25.00	26.65
2004-2010	CL	Count	66	73	10	59	13	66	64	59	54
2011	CL	Count	6	8		6		6	6	5	3

PERIOD	STATION	STATISTIC	LOXA119	LOXA120	LOXA121	LOXA122	LOXA123	LOXA124	LOXA126	LOXA127	LOXA128
2004-2010	DCS	Mean	0.44	0.48	0.50	0.39	0.77	0.48	0.42	0.39	0.30
2011	DCS	Mean	0.23	0.29		0.22		0.31	0.29	0.19	0.14
2004-2010	DCS	Standard Deviation	0.02	0.02	0.06	0.03	0.08	0.03	0.03	0.02	0.02
2011	DCS	Standard Deviation	0.01	0.01		0.01		0.01	0.01	0.01	0.01
2004-2010	DCS	25th Percentile	0.36	0.40	0.42	0.28	0.65	0.38	0.33	0.30	0.21
2011	DCS	25th Percentile	0.18	0.25		0.17		0.29	0.27	0.12	0.12
2004-2010	DCS	Median	0.43	0.48	0.45	0.40	0.83	0.49	0.43	0.38	0.29
2011	DCS	Median	0.24	0.28		0.23		0.30	0.31	0.13	0.13
2004-2010	DCS	75th Percentile	0.53	0.59	0.65	0.51	0.93	0.59	0.53	0.50	0.39
2011	DCS	75th Percentile	0.29	0.33		0.27		0.37	0.33	0.28	0.16
2004-2010	DCS	Count	74	75	6	72	14	72	70	72	70
2011	DCS	Count	7	7		6		5	4	7	5
2004-2010	NA	Mean	14.38	12.95	60.74	61.59	50.60	16.18	39.79	17.73	12.00
2011	NA	Mean	NA	NA		NA		NA	NA	NA	NA
2004-2010	NA	Standard Deviation	15.46	11.99	61.29	281.39	351.25	30.24	277.36	15.46	7.31
2011	NA	Standard Deviation	NA	NA		NA		NA	NA	NA	NA
2004-2010	NA	25th Percentile	11.75	10.60	55.40	54.50	42.58	11.53	30.50	15.98	11.20
2011	NA	25th Percentile	NA	NA		NA		NA	NA	NA	NA
2004-2010	NA	Median	13.50	12.10	58.80	62.40	46.35	15.35	33.70	17.75	13.00
2011	NA	Median	NA	NA		NA		NA	NA	NA	NA
2004-2010	NA	75th Percentile	15.30	14.20	66.30	70.00	46.98	19.85	50.70	20.50	13.35
2011	NA	75th Percentile	NA	NA		NA		NA	NA	NA	NA
2004-2010	NA	Count	12	13	5	9	10	12	13	10	7
2011	NA	Count	0	0		0		0	0	0	0
2004-2010	SIO2	Mean	7.97	4.73	16.31	12.39	14.98	5.51	7.77	5.76	3.98
2011	SIO2	Mean	7.62	4.37		16.93		8.63	10.29	5.98	4.09
2004-2010	SIO2	Standard Deviation	17.63	4.33	22.33	31.31	10.97	12.56	34.20	11.36	6.70
2011	SIO2	Standard Deviation	1.17	4.95		4.31		NA	10.45	0.27	0.04
2004-2010	SIO2	25th Percentile	4.89	3.47	15.10	9.03	13.20	2.45	2.45	3.71	2.51
2011	SIO2	25th Percentile	7.43	2.68		16.05		8.63	10.60	5.79	4.02
2004-2010	SIO2	Median	7.00	4.60	17.10	12.00	15.00	4.80	6.60	5.92	3.62
2011	SIO2	Median	8.24	4.24		17.40		8.63	10.70	5.98	4.09
2004-2010	SIO2	75th Percentile	10.85	5.73	19.90	16.48	15.60	8.58	12.00	7.82	4.67
2011	SIO2	75th Percentile	8.27	4.94		18.28		8.63	12.10	6.16	4.16
2004-2010	SIO2	Count	55	64	5	48	9	52	51	41	28
2011	SIO2	Count	5	6		4		1	5	2	2

PERIOD	STATION	STATISTIC	LOXA119	LOXA120	LOXA121	LOXA122	LOXA123	LOXA124	LOXA126	LOXA127	LOXA128
2004-2010	SO4	Mean	0.76	0.14	47.96	12.69	17.32	1.01	7.65	0.48	0.13
2011	SO4	Mean	0.96	0.43		20.63		7.35	16.12	0.50	0.37
2004-2010	SO4	Standard Deviation	0.44	0.02	612.22	197.91	207.29	2.36	108.95	1.39	0.02
2011	SO4	Standard Deviation	0.15	0.06		270.63		34.40	255.66	0.07	0.08
2004-2010	SO4	25th Percentile	0.41	0.03	39.90	3.83	10.30	0.32	1.10	0.04	0.03
2011	SO4	25th Percentile	0.63	0.38		6.84		2.46	4.04	0.54	0.29
2004-2010	SO4	Median	0.60	0.10	45.25	7.60	13.80	0.50	3.20	0.16	0.10
2011	SO4	Median	1.01	0.54		21.70		8.31	12.10	0.56	0.52
2004-2010	SO4	75th Percentile	0.95	0.20	48.58	15.48	18.10	0.80	9.30	0.35	0.17
2011	SO4	75th Percentile	1.15	0.56		26.93		10.44	23.03	0.57	0.53
2004-2010	SO4	Count	67	59	10	60	13	65	65	50	45
2011	SO4	Count	6	8		6		6	6	5	3
2004-2010	TDEPTH	Mean	0.31	0.36	0.21	0.71	0.26	0.31	0.30	0.26	0.20
2011	TDEPTH	Mean	0.25	0.26		0.26		0.20	0.29	0.19	0.18
2004-2010	TDEPTH	Standard Deviation	0.02	0.02	0.01	12.52	0.03	0.02	0.01	0.02	0.01
2011	TDEPTH	Standard Deviation	0.03	0.03		0.02		0.01	0.00	0.01	0.00
2004-2010	TDEPTH	25th Percentile	0.20	0.29	0.14	0.18	0.14	0.20	0.21	0.18	0.12
2011	TDEPTH	25th Percentile	0.16	0.14		0.18		0.17	0.25	0.12	0.16
2004-2010	TDEPTH	Median	0.30	0.36	0.15	0.28	0.23	0.31	0.30	0.24	0.17
2011	TDEPTH	Median	0.22	0.24		0.26		0.18	0.29	0.17	0.20
2004-2010	TDEPTH	75th Percentile	0.41	0.44	0.29	0.37	0.38	0.42	0.38	0.34	0.26
2011	TDEPTH	75th Percentile	0.34	0.34		0.35		0.19	0.34	0.27	0.22
2004-2010	TDEPTH	Count	72	74	11	66	16	69	67	67	62
2011	TDEPTH	Count	8	10		7		6	6	7	4
2004-2010	TDOC	Mean	17.29	17.32	30.80	24.44	24.10	18.17	19.89	19.67	17.88
2011	TDOC	Mean	26.26	22.23		29.13		21.10	24.26	25.00	28.80
2004-2010	TDOC	Standard Deviation	8.61	14.10	2.20	24.94	14.54	5.95	17.26	15.60	7.17
2011	TDOC	Standard Deviation	9.23	23.02		10.56		NA	10.80	0.18	10.58
2004-2010	TDOC	25th Percentile	15.00	14.50	30.00	21.25	21.50	17.00	16.00	16.53	15.85
2011	TDOC	25th Percentile	25.70	19.40		27.45		21.10	23.90	24.85	27.65
2004-2010	TDOC	Median	17.00	17.00	31.00	24.50	23.00	18.00	20.00	19.00	18.00
2011	TDOC	Median	26.00	21.60		29.75		21.10	25.90	25.00	28.80
2004-2010	TDOC	75th Percentile	19.00	20.00	31.00	27.50	25.50	19.00	22.05	22.00	20.00
2011	TDOC	75th Percentile	26.90	24.85		31.43		21.10	26.00	25.15	29.95
2004-2010	TDOC	Count	53	63	5	46	10	52	51	40	28
2011	TDOC	Count	5	6		4		1	5	2	2

PERIOD	STATION	STATISTIC	LOXA119	LOXA120	LOXA121	LOXA122	LOXA123	LOXA124	LOXA126	LOXA127	LOXA128
2004-2010	TDS	Mean	101.31	98.45	496.00	304.25	337.90	128.26	237.08	105.17	88.00
2011	TDS	Mean	149.00	108.33		426.50		311.00	356.00	109.50	90.50
2004-2010	TDS	Standard Deviation	608.62	1,194.44	2,009.50	20,016.74	19,901.66	2,120.24	12,823.68	894.90	333.41
2011	TDS	Standard Deviation	62.00	350.27		7,791.00		NA	10,253.00	684.50	1,200.50
2004-2010	TDS	25th Percentile	84.00	76.00	478.00	195.00	279.00	98.00	145.00	84.00	77.75
2011	TDS	25th Percentile	143.00	95.25		390.50		311.00	313.00	100.25	78.25
2004-2010	TDS	Median	95.00	92.00	503.00	284.00	302.50	120.00	216.50	110.00	85.50
2011	TDS	Median	150.00	108.00		432.50		311.00	363.00	109.50	90.50
2004-2010	TDS	75th Percentile	118.50	110.00	506.00	400.00	330.75	150.00	313.25	123.00	101.00
2011	TDS	75th Percentile	152.00	123.00		468.50		311.00	413.00	118.75	102.75
2004-2010	TDS	Count	55	65	5	48	10	53	52	41	28
2011	TDS	Count	5	6		4		1	5	2	2
2004-2010	TOC	Mean	17.85	17.40	31.20	24.76	24.30	18.53	20.16	19.86	18.01
2011	TOC	Mean	27.00	22.50		29.48		21.80	24.26	25.60	28.80
2004-2010	TOC	Standard Deviation	26.98	12.75	2.70	26.06	15.57	6.66	17.61	14.32	9.38
2011	TOC	Standard Deviation	6.59	21.78		9.71		NA	10.45	1.62	8.82
2004-2010	TOC	25th Percentile	15.00	15.00	30.00	21.00	22.00	17.00	16.00	16.60	15.90
2011	TOC	25th Percentile	25.70	20.13		27.75		21.80	24.30	25.15	27.75
2004-2010	TOC	Median	17.00	17.00	31.00	24.00	23.00	18.50	20.00	20.00	18.00
2011	TOC	Median	26.90	21.90		30.10		21.80	25.70	25.60	28.80
2004-2010	TOC	75th Percentile	19.00	19.50	31.00	28.75	26.25	20.00	23.30	22.00	20.00
2011	TOC	75th Percentile	27.10	24.65		31.83		21.80	25.80	26.05	29.85
2004-2010	TOC	Count	53	63	5	46	10	52	51	40	28
2011	TOC	Count	5	6		4		1	5	2	2
2004-2010	DO	Mean	5.21	5.61	0.85	2.17	1.58	2.38	4.89	4.66	5.18
2011	DO	Mean	5.09	5.50		1.19		2.91	2.38	3.50	4.58
2004-2010	DO	Standard Deviation	39.17	4.08	0.36	2.98	1.42	3.02	45.29	4.77	4.52
2011	DO	Standard Deviation	1.95	4.73		0.49		4.68	1.60	3.71	1.69
2004-2010	DO	25th Percentile	3.47	4.50	0.50	1.05	0.82	1.20	2.07	3.00	3.90
2011	DO	25th Percentile	3.60	4.14		0.74		1.48	1.98	1.74	3.96
2004-2010	DO	Median	4.41	5.60	0.71	1.70	1.07	2.00	3.42	4.39	4.96
2011	DO	Median	5.78	5.27		1.31		2.12	2.30	3.79	4.68
2004-2010	DO	75th Percentile	5.74	6.89	0.97	2.71	2.10	2.92	5.21	6.12	6.46
2011	DO	75th Percentile	6.25	6.26		1.36		4.04	3.47	4.24	5.25
2004-2010	DO	Count	64	71	10	58	12	61	61	56	54
2011	DO	Count	5	7		5		5	5	5	3

PERIOD	STATION	STATISTIC	LOXA119	LOXA120	LOXA121	LOXA122	LOXA123	LOXA124	LOXA126	LOXA127	LOXA128
2004-2010	OPO4	Mean	6.21	5.04	38.60	6.70	4.00	9.44	6.86	7.88	5.97
2011	OPO4	Mean	2.04	1.87		2.50		2.00	2.24	2.00	2.00
2004-2010	OPO4	Standard Deviation	117.21	40.75	1,628.80	171.25	0.67	497.42	104.40	107.68	43.12
2011	OPO4	Standard Deviation	0.18	0.33		1.83		NA	1.39	0.00	0.00
2004-2010	OPO4	25th Percentile	3.00	3.00	14.00	3.00	3.25	3.00	3.00	3.00	3.00
2011	OPO4	25th Percentile	2.00	1.63		1.88		2.00	2.00	2.00	2.00
2004-2010	OPO4	Median	3.30	3.00	22.00	3.35	4.00	3.00	3.00	3.00	4.00
2011	OPO4	Median	2.00	2.00		2.00		2.00	2.00	2.00	2.00
2004-2010	OPO4	75th Percentile	5.00	4.70	39.00	5.25	4.75	5.90	5.70	7.05	5.10
2011	OPO4	75th Percentile	2.00	2.00		2.63		2.00	2.00	2.00	2.00
2004-2010	OPO4	Count	45	51	5	40	10	45	43	35	25
2011	OPO4	Count	5	6		4		1	5	2	2
2004-2010	PH	Mean	6.65	6.74	7.02	6.94	7.08	6.70	7.00	6.69	6.53
2011	PH	Mean	6.87	6.64		6.80		6.66	6.79	6.68	6.73
2004-2010	PH	Standard Deviation	0.12	0.20	0.04	0.12	0.03	0.22	0.23	0.22	0.11
2011	PH	Standard Deviation	0.18	0.22		0.10		0.29	0.18	0.32	0.48
2004-2010	PH	25th Percentile	6.43	6.44	7.00	6.70	6.90	6.35	6.73	6.38	6.28
2011	PH	25th Percentile	6.77	6.56		6.52		6.18	6.46	6.17	6.34
2004-2010	PH	Median	6.58	6.61	7.06	6.97	7.07	6.66	6.93	6.56	6.45
2011	PH	Median	6.91	6.63		6.79		6.60	6.85	6.50	6.37
2004-2010	PH	75th Percentile	6.81	7.02	7.11	7.15	7.23	7.02	7.08	6.89	6.71
2011	PH	75th Percentile	7.04	6.68		7.01		7.16	7.10	7.21	6.95
2004-2010	PH	Count	65	72	10	60	13	64	63	58	56
2011	PH	Count	6	8		6		6	6	5	3
2004-2010	SPCOND	Mean	138.41	145.92	776.66	563.86	486.55	178.56	346.18	128.25	109.65
2011	SPCOND	Mean	178.75	157.65		578.60		381.18	544.90	125.48	129.53
2004-2010	SPCOND	Standard Deviation	12,108.62	13,802.41	76,254.94	843,424.00	34,916.50	4,782.00	33,416.55	1,306.24	641.60
2011	SPCOND	Standard Deviation	664.01	2,605.90		34,358.68		32,172.67	37,550.86	372.76	136.40
2004-2010	SPCOND	25th Percentile	103.10	99.50	665.50	257.10	443.85	133.30	190.38	102.30	88.85
2011	SPCOND	25th Percentile	165.88	135.55		439.38		220.88	384.50	110.70	125.10
2004-2010	SPCOND	Median	116.40	114.95	791.20	439.50	484.35	160.90	294.30	117.45	109.25
2011	SPCOND	Median	186.60	148.10		608.05		427.40	556.50	124.20	133.90
2004-2010	SPCOND	75th Percentile	137.95	150.23	913.50	613.10	497.00	197.08	465.50	150.48	124.30
2011	SPCOND	75th Percentile	199.21	162.05		688.83		526.38	691.08	142.10	136.15
2004-2010	SPCOND	Count	63	70	11	61	14	64	64	58	54
2011	SPCOND	Count	6	8		6		6	6	5	3

PERIOD	STATION	STATISTIC	LOXA119	LOXA120	LOXA121	LOXA122	LOXA123	LOXA124	LOXA126	LOXA127	LOXA128
2004-2010	TDP	Mean	5.15	5.44	46.00	6.78	6.11	16.63	6.44	6.46	6.00
2011	TDP	Mean	NA	NA		NA		NA	NA	NA	NA
2004-2010	TDP	Standard Deviation	1.14	0.93	1,619.50	2.44	1.36	1,262.12	5.06	1.60	4.40
2011	TDP	Standard Deviation	NA	NA		NA		NA	NA	NA	NA
2004-2010	TDP	25th Percentile	4.00	5.00	18.00	6.00	5.00	5.75	5.00	6.00	4.25
2011	TDP	25th Percentile	NA	NA		NA		NA	NA	NA	NA
2004-2010	TDP	Median	5.00	5.00	30.00	7.00	6.00	7.50	6.00	6.00	5.50
2011	TDP	Median	NA	NA		NA		NA	NA	NA	NA
2004-2010	TDP	75th Percentile	6.00	6.00	53.00	8.00	7.00	9.25	8.00	7.00	7.50
2011	TDP	75th Percentile	NA	NA		NA		NA	NA	NA	NA
2004-2010	TDP	Count	13	16	5	9	9	16	16	13	6
2011	TDP	Count	0	0		0		0	0	0	0
2004-2010	TEMP	Mean	23.93	24.92	21.95	22.99	24.20	22.73	23.98	24.66	25.26
2011	TEMP	Mean	24.76	25.01		22.76		21.90	21.82	24.86	25.36
2004-2010	TEMP	Standard Deviation	25.58	20.15	26.10	21.67	18.99	22.48	24.80	26.21	23.92
2011	TEMP	Standard Deviation	7.90	11.36		7.37		26.86	29.85	6.50	14.58
2004-2010	TEMP	25th Percentile	20.86	22.15	17.45	19.89	20.88	20.00	21.09	21.88	22.49
2011	TEMP	25th Percentile	22.83	22.56		21.12		22.03	21.56	23.18	23.19
2004-2010	TEMP	Median	24.05	25.66	23.80	23.20	25.70	23.69	24.50	25.30	25.31
2011	TEMP	Median	23.84	23.39		21.40		22.81	22.52	24.27	23.83
2004-2010	TEMP	75th Percentile	27.90	27.90	26.35	27.00	27.58	26.90	27.96	28.36	28.55
2011	TEMP	75th Percentile	27.10	28.31		24.82		24.80	25.30	26.69	26.77
2004-2010	TEMP	Count	66	73	11	61	14	65	65	60	56
2011	TEMP	Count	6	8		6		6	6	5	3
2004-2010	TN	Mean	1.08	1.26	1.69	1.19	1.39	1.00	1.20	1.22	1.05
2011	TN	Mean	1.56	1.60		1.45		1.11	1.33	1.37	1.58
2004-2010	TN	Standard Deviation	1.24	1.03	1.00	0.16	0.36	0.13	0.12	0.13	0.23
2011	TN	Standard Deviation	0.03	0.05		0.04		NA	0.01	0.00	0.03
2004-2010	TN	25th Percentile	0.78	0.94	1.79	0.97	1.26	0.81	0.96	0.96	0.82
2011	TN	25th Percentile	1.47	1.49		1.37		1.11	1.29	1.35	1.52
2004-2010	TN	Median	0.93	1.04	1.91	1.10	1.39	0.93	1.12	1.13	1.00
2011	TN	Median	1.56	1.54		1.46		1.11	1.36	1.37	1.58
2004-2010	TN	75th Percentile	1.10	1.28	2.04	1.40	1.63	1.10	1.38	1.40	1.15
2011	TN	75th Percentile	1.65	1.65		1.54		1.11	1.40	1.38	1.65
2004-2010	TN	Count	52	62	5	45	10	50	49	38	27
2011	TN	Count	4	4		4		1	4	2	2

PERIOD	STATION	STATISTIC	LOXA119	LOXA120	LOXA121	LOXA122	LOXA123	LOXA124	LOXA126	LOXA127	LOXA128
2004-2010	TP	Mean	9.92	10.55	82.90	12.45	14.57	17.07	10.39	7.89	6.88
2011	TP	Mean	11.07	11.81		15.87		11.50	11.38	6.62	6.57
2004-2010	TP	Standard Deviation	149.61	282.05	2,316.10	70.35	60.73	529.73	33.89	24.40	40.18
2011	TP	Standard Deviation	14.85	54.98		12.68		19.84	43.61	4.69	1.10
2004-2010	TP	25th Percentile	5.00	4.73	50.25	8.00	9.25	7.40	6.00	4.70	3.00
2011	TP	25th Percentile	9.30	7.53		12.90		8.20	7.58	5.10	6.05
2004-2010	TP	Median	6.80	6.40	67.50	11.00	13.00	12.50	10.00	7.00	5.00
2011	TP	Median	9.65	10.25		14.90		10.60	9.40	6.30	6.60
2004-2010	TP	75th Percentile	9.00	8.78	110.50	15.00	16.25	17.73	12.75	10.00	8.00
2011	TP	75th Percentile	13.00	11.55		19.15		14.65	13.78	8.30	7.10
2004-2010	TP	Count	65	72	10	61	14	64	63	57	53
2011	TP	Count	6	8		6		6	6	5	3
2004-2010	TSS	Mean	3.60	6.20	13.96	1.68	3.84	2.52	2.05	2.23	3.22
2011	TSS	Mean	4.31	2.61		3.50		2.92	2.50	2.67	2.50
2004-2010	TSS	Standard Deviation	131.52	459.17	341.57	0.78	50.18	8.47	1.47	1.36	19.01
2011	TSS	Standard Deviation	16.22	0.09		6.00		1.04	0.00	0.14	0.00
2004-2010	TSS	25th Percentile	1.60	1.60	1.60	1.00	1.60	1.60	1.60	1.60	1.60
2011	TSS	25th Percentile	2.50	2.50		2.50		2.50	2.50	2.50	2.50
2004-2010	TSS	Median	1.60	2.00	1.60	1.60	1.60	2.00	1.80	2.00	2.00
2011	TSS	Median	2.50	2.50		2.50		2.50	2.50	2.50	2.50
2004-2010	TSS	75th Percentile	2.50	2.50	22.00	2.00	1.60	2.70	2.50	2.75	2.75
2011	TSS	75th Percentile	3.14	2.50		2.50		2.50	2.50	2.50	2.50
2004-2010	TSS	Count	54	63	5	47	10	56	54	47	43
2011	TSS	Count	6	8		6		6	6	5	3
2004-2010	DEPTH	Mean	0.20	0.20	1.00	0.19	0.68	0.20	0.18	0.17	0.15
2011	DEPTH	Mean	0.15	0.15		0.15		0.10	0.14	0.11	0.09
2004-2010	DEPTH	Standard Deviation	0.03	0.02	0.00	0.04	0.31	0.03	0.03	0.04	0.04
2011	DEPTH	Standard Deviation	0.00	0.01		0.00		0.00	0.00	0.00	0.00
2004-2010	DEPTH	25th Percentile	0.12	0.16	1.00	0.12	0.52	0.11	0.11	0.09	0.07
2011	DEPTH	25th Percentile	0.10	0.11		0.10		0.08	0.13	0.08	0.08
2004-2010	DEPTH	Median	0.16	0.18	1.00	0.15	1.00	0.17	0.15	0.13	0.11
2011	DEPTH	Median	0.13	0.14		0.14		0.09	0.15	0.09	0.10
2004-2010	DEPTH	75th Percentile	0.21	0.23	1.00	0.18	1.00	0.21	0.18	0.18	0.14
2011	DEPTH	75th Percentile	0.21	0.18		0.19		0.09	0.16	0.14	0.11
2004-2010	DEPTH	Count	46	51	2	44	3	47	47	42	42
2011	DEPTH	Count	6	8		6		6	6	6	4

PERIOD	STATION	STATISTIC	LOXA129	LOXA130	LOXA131	LOXA132	LOXA133	LOXA134	LOXA135	LOXA136	LOXA137
2004-2010	ALK	Mean	158.81	97.08	52.55	163.84	115.58	85.95	164.41	128.13	82.92
2011	ALK	Mean	150.44	110.20	43.60	151.83	138.00	85.63	154.58	106.90	86.90
2004-2010	ALK	Standard Deviation	2,033.54	2,017.80	1,143.39	1,864.90	1,812.48	1,847.07	1,958.97	3,315.98	1,970.99
2011	ALK	Standard Deviation	789.49	1,834.16	214.33	755.61	NA	1,212.00	777.90	1,486.61	1,159.41
2004-2010	ALK	25th Percentile	125.00	60.75	32.25	130.00	90.38	51.25	130.25	72.75	50.00
2011	ALK	25th Percentile	138.25	87.35	35.15	134.75	138.00	67.95	132.00	74.95	69.85
2004-2010	ALK	Median	150.00	82.50	45.50	160.00	115.00	80.50	155.50	125.00	71.00
2011	ALK	Median	150.00	107.40	35.50	153.50	138.00	84.50	153.00	100.55	86.80
2004-2010	ALK	75th Percentile	189.50	131.00	63.75	190.00	126.00	100.00	190.00	174.50	109.00
2011	ALK	75th Percentile	157.25	130.25	48.00	160.00	138.00	102.75	174.50	132.50	103.90
2004-2010	ALK	Count	79	56	52	77	18	42	78	30	47
2011	ALK	Count	12	4	3	12	1	3	12	4	3
2004-2010	CA	Mean	55.14	31.99	15.77	56.56	36.83	28.31	57.36	40.73	27.12
2011	CA	Mean	52.52	39.53	19.10	53.54	51.40	34.80	53.68	39.53	32.07
2004-2010	CA	Standard Deviation	269.54	228.85	56.96	267.30	307.24	206.20	236.89	348.40	212.86
2011	CA	Standard Deviation	156.84	289.26	28.17	135.97	NA	190.33	135.64	222.32	252.36
2004-2010	CA	25th Percentile	43.90	18.65	9.97	44.98	26.45	17.13	47.10	24.00	16.00
2011	CA	25th Percentile	46.20	29.85	16.25	49.38	51.40	28.25	45.95	28.93	24.45
2004-2010	CA	Median	53.90	28.00	14.00	54.00	39.00	24.90	54.20	41.00	21.50
2011	CA	Median	52.20	39.35	18.20	51.70	51.40	36.10	53.90	36.85	33.30
2004-2010	CA	75th Percentile	65.85	40.30	19.25	65.00	44.15	37.75	64.00	54.75	35.43
2011	CA	75th Percentile	59.65	49.03	21.50	57.40	51.40	42.00	58.38	47.45	40.30
2004-2010	CA	Count	79	55	52	76	19	42	79	30	48
2011	CA	Count	12	4	3	12	1	3	12	4	3
2004-2010	CL	Mean	88.38	54.15	33.46	94.27	57.73	49.33	100.51	61.94	47.08
2011	CL	Mean	146.86	70.49	36.31	148.79	70.88	54.18	153.04	83.33	55.88
2004-2010	CL	Standard Deviation	951.21	977.20	350.93	1,004.34	893.52	816.74	1,028.00	937.02	710.60
2011	CL	Standard Deviation	3,009.08	907.62	426.87	2,707.43	1,599.90	1,397.19	3,031.48	612.44	1,541.74
2004-2010	CL	25th Percentile	63.50	26.25	18.45	67.55	31.00	24.00	69.03	37.25	23.05
2011	CL	25th Percentile	108.75	47.25	22.50	115.25	36.93	29.13	112.75	66.50	28.18
2004-2010	CL	Median	88.35	47.00	31.00	94.60	53.50	49.00	104.00	56.70	45.10
2011	CL	Median	125.00	54.75	25.90	133.00	71.30	35.35	143.50	76.40	36.90
2004-2010	CL	75th Percentile	110.00	73.98	44.93	119.75	83.40	73.00	123.75	84.75	69.95
2011	CL	75th Percentile	182.75	92.53	44.50	177.00	105.25	85.90	169.00	102.20	88.75
2004-2010	CL	Count	78	66	64	78	42	65	78	50	66
2011	CL	Count	12	8	7	12	4	6	12	6	6

PERIOD	STATION	STATISTIC	LOXA129	LOXA130	LOXA131	LOXA132	LOXA133	LOXA134	LOXA135	LOXA136	LOXA137
2004-2010	DCS	Mean	0.99	0.38	0.37	0.99	0.32	0.40	1.00	0.46	0.37
2011	DCS	Mean	1.00	0.22	0.19	1.00	0.22	0.21	1.00	0.40	0.28
2004-2010	DCS	Standard Deviation	0.01	0.02	0.02	0.01	0.03	0.02	0.00	0.03	0.02
2011	DCS	Standard Deviation	0.00	0.01	0.00	0.00	0.00	0.02	0.00	0.03	0.00
2004-2010	DCS	25th Percentile	1.00	0.29	0.28	1.00	0.22	0.31	1.00	0.34	0.25
2011	DCS	25th Percentile	1.00	0.20	0.15	1.00	0.20	0.18	1.00	0.32	0.26
2004-2010	DCS	Median	1.00	0.35	0.35	1.00	0.30	0.38	1.00	0.43	0.35
2011	DCS	Median	1.00	0.23	0.20	1.00	0.20	0.25	1.00	0.38	0.29
2004-2010	DCS	75th Percentile	1.00	0.48	0.44	1.00	0.43	0.50	1.00	0.55	0.46
2011	DCS	75th Percentile	1.00	0.25	0.23	1.00	0.23	0.29	1.00	0.45	0.31
2004-2010	DCS	Count	36	72	71	36	55	68	35	55	70
2011	DCS	Count	9	6	7	9	3	4	9	4	4
2004-2010	NA	Mean	59.92	42.24	30.05	64.21	45.84	39.15	65.87	48.44	29.33
2011	NA	Mean	NA	NA	NA	NA	NA	NA	NA	NA	NA
2004-2010	NA	Standard Deviation	348.53	304.83	194.70	287.27	347.48	81.76	378.59	365.04	222.03
2011	NA	Standard Deviation	NA	NA	NA	NA	NA	NA	NA	NA	NA
2004-2010	NA	25th Percentile	43.65	25.88	19.70	48.58	40.40	34.55	51.05	36.30	22.83
2011	NA	25th Percentile	NA	NA	NA	NA	NA	NA	NA	NA	NA
2004-2010	NA	Median	64.60	45.45	30.30	65.30	45.40	39.60	66.10	45.10	25.70
2011	NA	Median	NA	NA	NA	NA	NA	NA	NA	NA	NA
2004-2010	NA	75th Percentile	74.90	55.40	36.80	80.70	46.70	41.80	78.65	45.70	31.45
2011	NA	75th Percentile	NA	NA	NA	NA	NA	NA	NA	NA	NA
2004-2010	NA	Count	19	14	13	18	5	10	19	5	12
2011	NA	Count	0	0	0	0	0	0	0	0	0
2004-2010	SIO2	Mean	9.61	8.61	6.70	10.05	12.13	9.14	9.65	12.00	9.59
2011	SIO2	Mean	9.69	11.43	10.55	9.62	13.20	11.22	9.31	13.05	9.60
2004-2010	SIO2	Standard Deviation	23.55	28.89	28.84	30.52	27.45	30.50	27.06	45.70	45.99
2011	SIO2	Standard Deviation	21.28	33.39	2.25	22.34	NA	16.66	15.80	3.24	50.31
2004-2010	SIO2	25th Percentile	6.10	4.30	1.60	6.05	8.15	5.32	5.81	6.53	3.87
2011	SIO2	25th Percentile	7.35	11.05	9.73	6.52	13.20	9.74	7.91	12.80	7.05
2004-2010	SIO2	Median	9.30	7.50	6.42	9.79	11.45	7.80	9.30	10.50	8.75
2011	SIO2	Median	9.81	13.90	10.20	9.99	13.20	12.90	9.68	13.70	12.60
2004-2010	SIO2	75th Percentile	12.95	12.25	9.10	13.00	17.63	12.30	12.95	17.00	13.25
2011	SIO2	75th Percentile	10.95	14.28	11.20	11.43	13.20	13.55	10.63	13.95	13.65
2004-2010	SIO2	Count	79	56	52	78	18	42	79	30	48
2011	SIO2	Count	12	4	3	12	1	3	12	4	3

PERIOD	STATION	STATISTIC	LOXA129	LOXA130	LOXA131	LOXA132	LOXA133	LOXA134	LOXA135	LOXA136	LOXA137
2004-2010	SO4	Mean	26.17	6.35	1.80	28.96	7.77	7.59	31.51	11.07	6.43
2011	SO4	Mean	36.65	27.19	4.68	38.40	10.00	9.05	38.20	10.18	9.14
2004-2010	SO4	Standard Deviation	337.32	79.83	12.94	390.44	119.56	128.93	439.01	245.76	112.97
2011	SO4	Standard Deviation	382.30	3,125.32	30.46	340.28	168.83	133.26	273.15	214.37	130.57
2004-2010	SO4	25th Percentile	11.80	1.40	0.52	15.00	1.20	1.13	16.25	1.23	0.93
2011	SO4	25th Percentile	20.85	1.14	1.12	27.38	2.23	1.87	30.95	1.83	1.35
2004-2010	SO4	Median	21.65	2.20	0.71	24.80	2.10	2.40	26.00	3.25	1.50
2011	SO4	Median	36.35	4.20	3.04	36.45	4.57	4.16	34.60	3.47	5.19
2004-2010	SO4	75th Percentile	36.08	6.15	1.50	37.73	9.10	10.20	41.53	12.75	5.25
2011	SO4	75th Percentile	56.65	15.93	5.34	48.98	12.33	10.65	45.28	10.33	11.12
2004-2010	SO4	Count	78	67	65	78	43	66	78	50	67
2011	SO4	Count	12	8	7	12	4	6	12	6	6
2004-2010	TDEPTH	Mean	0.77	0.29	0.28	0.62	0.19	0.27	0.59	0.25	0.27
2011	TDEPTH	Mean	NA	0.21	0.18	NA	0.20	0.23	NA	0.28	0.25
2004-2010	TDEPTH	Standard Deviation	0.16	0.02	0.01	0.19	0.01	0.01	0.14	0.02	0.01
2011	TDEPTH	Standard Deviation	NA	0.01	0.01	NA	0.01	0.01	NA	0.03	0.01
2004-2010	TDEPTH	25th Percentile	0.66	0.21	0.20	0.27	0.12	0.18	0.39	0.15	0.18
2011	TDEPTH	25th Percentile	NA	0.16	0.14	NA	0.15	0.15	NA	0.15	0.18
2004-2010	TDEPTH	Median	1.00	0.28	0.27	0.65	0.16	0.26	0.50	0.21	0.25
2011	TDEPTH	Median	NA	0.19	0.17	NA	0.16	0.22	NA	0.24	0.21
2004-2010	TDEPTH	75th Percentile	1.00	0.36	0.35	1.00	0.23	0.36	0.75	0.32	0.34
2011	TDEPTH	75th Percentile	NA	0.28	0.22	NA	0.21	0.28	NA	0.36	0.34
2004-2010	TDEPTH	Count	3	70	67	4	48	66	3	53	67
2011	TDEPTH	Count	0	9	8	0	4	6	0	6	6
2004-2010	TDOC	Mean	24.01	22.09	20.93	24.85	22.87	22.64	24.62	25.63	24.40
2011	TDOC	Mean	92.13	29.25	30.87	86.93	31.30	34.17	88.16	40.03	29.60
2004-2010	TDOC	Standard Deviation	27.12	23.94	20.66	31.25	52.70	27.40	29.91	23.77	18.04
2011	TDOC	Standard Deviation	51,410.14	31.74	10.70	44,421.96	NA	24.36	46,405.64	107.96	15.31
2004-2010	TDOC	25th Percentile	20.00	18.00	17.95	21.00	18.00	18.00	20.00	21.00	21.00
2011	TDOC	25th Percentile	23.80	27.40	29.00	24.63	31.30	31.35	25.45	32.53	28.30
2004-2010	TDOC	Median	23.00	21.00	20.00	24.00	24.00	23.00	24.70	27.00	24.00
2011	TDOC	Median	28.65	30.55	29.50	27.35	31.30	32.10	27.20	40.70	31.50
2004-2010	TDOC	75th Percentile	28.00	25.25	23.50	29.00	27.30	27.00	28.00	29.00	27.50
2011	TDOC	75th Percentile	29.95	32.40	32.05	29.68	31.30	35.95	29.45	48.20	31.85
2004-2010	TDOC	Count	77	55	51	75	17	41	77	29	47
2011	TDOC	Count	12	4	3	12	1	3	12	4	3

PERIOD	STATION	STATISTIC	LOXA129	LOXA130	LOXA131	LOXA132	LOXA133	LOXA134	LOXA135	LOXA136	LOXA137
2004-2010	TDS	Mean	405.18	252.55	155.38	424.65	312.06	238.81	427.73	328.87	232.51
2011	TDS	Mean	483.44	349.50	206.33	478.87	419.00	324.00	485.71	378.25	317.67
2004-2010	TDS	Standard Deviation	15,502.89	13,189.27	5,168.75	15,258.85	14,030.88	11,941.77	18,604.12	21,936.12	13,102.08
2011	TDS	Standard Deviation	38,718.52	14,873.67	3,569.33	34,667.45	NA	12,099.00	34,870.02	7,412.25	20,108.33
2004-2010	TDS	25th Percentile	320.00	153.75	108.50	330.00	248.00	135.00	350.00	210.00	130.00
2011	TDS	25th Percentile	421.25	301.75	183.00	396.25	419.00	283.00	431.00	309.50	266.00
2004-2010	TDS	Median	390.00	225.00	140.50	419.50	298.00	230.50	430.00	297.00	220.00
2011	TDS	Median	492.00	380.50	227.00	494.00	419.00	367.00	504.00	374.00	376.00
2004-2010	TDS	75th Percentile	495.50	325.25	187.50	503.75	377.75	307.75	509.00	447.75	300.00
2011	TDS	75th Percentile	587.00	428.25	240.00	570.25	419.00	386.50	559.00	442.75	398.50
2004-2010	TDS	Count	79	56	52	78	18	42	79	30	47
2011	TDS	Count	12	4	3	12	1	3	12	4	3
2004-2010	TOC	Mean	24.56	22.40	21.15	25.59	24.72	22.98	25.16	26.73	24.69
2011	TOC	Mean	28.12	29.40	30.97	27.32	31.30	34.33	27.58	40.05	28.97
2004-2010	TOC	Standard Deviation	29.28	27.66	21.33	37.93	50.24	35.56	45.69	37.94	26.36
2011	TOC	Standard Deviation	37.23	34.26	10.20	45.68	NA	26.30	53.17	116.32	21.05
2004-2010	TOC	25th Percentile	21.00	18.00	18.00	21.00	18.00	18.00	21.00	22.00	21.00
2011	TOC	25th Percentile	23.93	27.25	29.15	24.43	31.30	31.40	24.35	32.08	27.40
2004-2010	TOC	Median	24.00	21.00	20.00	25.00	25.00	22.00	25.00	27.00	24.00
2011	TOC	Median	28.20	30.55	29.70	27.50	31.30	32.10	27.95	40.20	31.10
2004-2010	TOC	75th Percentile	27.75	26.50	24.00	29.00	28.00	28.00	29.00	30.10	28.00
2011	TOC	75th Percentile	30.25	32.70	32.15	29.63	31.30	36.15	29.43	48.18	31.60
2004-2010	TOC	Count	78	55	51	76	17	41	78	29	47
2011	TOC	Count	12	4	3	12	1	3	12	4	3
2004-2010	DO	Mean	3.49	2.37	4.87	3.78	2.39	3.74	4.24	1.90	2.89
2011	DO	Mean	5.63	3.63	5.28	6.17	1.32	3.20	5.67	1.14	1.96
2004-2010	DO	Standard Deviation	3.48	1.99	4.89	3.84	1.52	4.34	5.13	1.70	2.96
2011	DO	Standard Deviation	4.28	4.39	11.31	4.63	0.71	6.98	2.65	0.34	1.16
2004-2010	DO	25th Percentile	2.06	1.34	3.42	2.22	1.31	1.96	2.46	0.82	1.56
2011	DO	25th Percentile	3.74	2.42	3.34	4.96	0.73	1.58	4.98	1.12	1.32
2004-2010	DO	Median	3.34	2.30	4.30	3.68	2.29	4.04	4.12	1.67	2.62
2011	DO	Median	5.66	3.98	3.79	5.61	1.21	1.61	5.42	1.15	1.82
2004-2010	DO	75th Percentile	5.01	2.97	6.56	5.15	3.23	4.92	5.82	2.56	3.80
2011	DO	75th Percentile	6.71	4.42	5.39	6.81	1.80	4.48	5.59	1.38	2.21
2004-2010	DO	Count	75	63	59	75	40	62	76	49	64
2011	DO	Count	11	7	8	11	4	5	11	5	5

PERIOD	STATION	STATISTIC	LOXA129	LOXA130	LOXA131	LOXA132	LOXA133	LOXA134	LOXA135	LOXA136	LOXA137
2004-2010	OPO4	Mean	26.37	9.96	6.98	29.09	29.34	13.49	28.81	14.36	6.17
2011	OPO4	Mean	5.91	1.75	2.00	4.33	2.00	2.00	2.99	2.60	1.67
2004-2010	OPO4	Standard Deviation	3,698.16	731.65	106.40	4,826.70	3,522.80	1,040.88	5,396.90	1,463.96	78.32
2011	OPO4	Standard Deviation	15.69	0.25	0.00	7.09	NA	0.00	3.28	1.44	0.33
2004-2010	OPO4	25th Percentile	4.20	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
2011	OPO4	25th Percentile	2.95	1.75	2.00	1.88	2.00	2.00	1.50	2.00	1.50
2004-2010	OPO4	Median	8.00	3.00	3.05	8.00	6.90	5.00	7.20	3.00	3.00
2011	OPO4	Median	5.35	2.00	2.00	4.65	2.00	2.00	2.00	2.00	2.00
2004-2010	OPO4	75th Percentile	22.00	5.60	5.15	27.00	35.00	8.60	22.00	6.10	5.98
2011	OPO4	75th Percentile	7.63	2.00	2.00	6.10	2.00	2.00	4.63	2.60	2.00
2004-2010	OPO4	Count	71	48	44	69	18	37	65	27	38
2011	OPO4	Count	12	4	3	12	1	3	12	4	3
2004-2010	PH	Mean	7.28	6.81	6.92	7.42	6.83	6.97	7.50	6.89	6.77
2011	PH	Mean	7.55	6.72	6.58	7.63	6.87	6.77	7.58	6.65	6.47
2004-2010	PH	Standard Deviation	0.42	0.06	0.11	0.09	0.07	0.08	0.06	0.07	0.08
2011	PH	Standard Deviation	0.14	0.22	0.28	0.10	0.23	0.30	0.15	0.16	0.18
2004-2010	PH	25th Percentile	7.19	6.68	6.67	7.20	6.68	6.77	7.35	6.69	6.59
2011	PH	25th Percentile	7.30	6.44	6.15	7.43	6.62	6.51	7.29	6.36	6.38
2004-2010	PH	Median	7.29	6.81	6.89	7.37	6.85	6.96	7.47	6.89	6.77
2011	PH	Median	7.52	6.60	6.53	7.58	7.00	6.74	7.61	6.62	6.59
2004-2010	PH	75th Percentile	7.51	6.98	7.08	7.61	7.01	7.11	7.64	7.07	6.99
2011	PH	75th Percentile	7.72	7.03	6.97	7.79	7.24	6.98	7.76	6.86	6.71
2004-2010	PH	Count	77	66	63	77	43	65	78	51	67
2011	PH	Count	12	8	7	12	4	6	12	6	6
2004-2010	SPCOND	Mean	646.27	382.83	208.18	680.66	406.72	348.82	704.97	436.41	315.74
2011	SPCOND	Mean	846.02	470.20	213.16	856.53	464.80	334.83	873.91	499.00	342.92
2004-2010	SPCOND	Standard Deviation	37,550.09	36,978.22	12,417.19	36,012.13	34,793.91	30,862.80	34,745.53	45,026.35	30,723.23
2011	SPCOND	Standard Deviation	48,532.11	32,294.14	7,364.41	41,818.37	38,074.02	39,124.62	41,233.85	26,606.92	43,412.73
2004-2010	SPCOND	25th Percentile	523.55	216.38	114.75	541.05	210.50	170.50	550.73	240.10	170.93
2011	SPCOND	25th Percentile	702.58	318.25	162.40	741.48	305.28	208.28	773.10	385.50	200.93
2004-2010	SPCOND	Median	629.60	335.90	188.40	665.90	418.10	341.40	719.45	407.30	276.90
2011	SPCOND	Median	810.25	435.90	176.30	811.90	445.75	228.25	880.90	432.50	245.60
2004-2010	SPCOND	75th Percentile	793.60	496.75	278.05	800.50	543.45	476.60	813.85	594.50	425.58
2011	SPCOND	75th Percentile	962.28	590.08	233.15	946.68	605.28	457.40	936.50	605.05	465.63
2004-2010	SPCOND	Count	79	66	63	79	44	65	78	51	66
2011	SPCOND	Count	12	8	7	12	4	6	12	6	6

PERIOD	STATION	STATISTIC	LOXA129	LOXA130	LOXA131	LOXA132	LOXA133	LOXA134	LOXA135	LOXA136	LOXA137
2004-2010	TDP	Mean	66.22	19.44	5.50	73.95	83.60	27.27	71.42	61.60	10.87
2011	TDP	Mean	NA	NA	NA	NA	NA	NA	NA	NA	NA
2004-2010	TDP	Standard Deviation	9,003.18	1,833.20	1.60	12,304.05	10,070.30	3,148.22	13,998.25	6,437.30	59.55
2011	TDP	Standard Deviation	NA	NA	NA	NA	NA	NA	NA	NA	NA
2004-2010	TDP	25th Percentile	27.50	6.25	5.00	22.25	18.00	7.00	18.75	18.00	7.00
2011	TDP	25th Percentile	NA	NA	NA	NA	NA	NA	NA	NA	NA
2004-2010	TDP	Median	38.00	9.00	5.00	40.50	55.00	11.00	37.50	20.00	9.00
2011	TDP	Median	NA	NA	NA	NA	NA	NA	NA	NA	NA
2004-2010	TDP	75th Percentile	44.00	10.00	7.00	55.75	79.00	14.00	64.50	55.00	9.50
2011	TDP	75th Percentile	NA	NA	NA	NA	NA	NA	NA	NA	NA
2004-2010	TDP	Count	23	18	16	22	5	11	24	5	15
2011	TDP	Count	0	0	0	0	0	0	0	0	0
2004-2010	TEMP	Mean	25.00	23.91	24.24	25.22	22.64	24.38	25.05	22.68	23.64
2011	TEMP	Mean	25.60	24.61	24.05	25.72	24.11	22.80	25.55	22.08	22.68
2004-2010	TEMP	Standard Deviation	19.66	24.25	26.41	19.43	21.97	24.87	19.13	23.46	25.92
2011	TEMP	Standard Deviation	18.42	30.78	38.50	17.40	7.24	27.90	15.99	11.88	9.01
2004-2010	TEMP	25th Percentile	22.28	21.07	21.23	22.49	18.92	21.00	22.11	19.80	20.16
2011	TEMP	25th Percentile	22.58	23.19	22.20	22.80	22.19	21.92	22.42	19.30	20.96
2004-2010	TEMP	Median	25.15	24.18	24.79	25.35	22.65	25.38	25.41	22.61	24.27
2011	TEMP	Median	27.50	26.24	26.71	27.08	24.30	23.38	26.67	21.69	22.25
2004-2010	TEMP	75th Percentile	28.87	27.98	27.91	28.98	26.78	27.99	29.14	27.21	27.82
2011	TEMP	75th Percentile	29.32	28.37	27.98	29.47	26.22	26.09	28.78	24.76	24.89
2004-2010	TEMP	Count	78	66	63	78	43	65	78	50	66
2011	TEMP	Count	12	8	7	12	4	6	12	6	6
2004-2010	TN	Mean	1.76	1.24	1.30	1.84	1.83	1.35	1.85	1.52	1.41
2011	TN	Mean	1.97	1.66	1.54	1.88	1.79	1.74	1.86	2.25	1.77
2004-2010	TN	Standard Deviation	0.51	0.22	0.22	0.60	0.54	0.25	0.46	0.35	0.09
2011	TN	Standard Deviation	0.28	0.01	0.04	0.25	NA	0.06	0.31	0.43	0.02
2004-2010	TN	25th Percentile	1.37	0.90	1.01	1.32	1.30	1.00	1.41	1.10	1.20
2011	TN	25th Percentile	1.47	1.60	1.43	1.42	1.79	1.62	1.49	1.72	1.72
2004-2010	TN	Median	1.60	1.10	1.21	1.68	1.60	1.30	1.79	1.40	1.34
2011	TN	Median	2.10	1.63	1.44	1.97	1.79	1.69	1.88	2.18	1.77
2004-2010	TN	75th Percentile	2.08	1.50	1.48	2.17	2.03	1.55	2.13	1.81	1.60
2011	TN	75th Percentile	2.35	1.71	1.61	2.11	1.79	1.85	2.13	2.71	1.82
2004-2010	TN	Count	76	53	50	74	16	40	75	29	46
2011	TN	Count	10	3	3	10	1	3	10	4	2

PERIOD	STATION	STATISTIC	LOXA129	LOXA130	LOXA131	LOXA132	LOXA133	LOXA134	LOXA135	LOXA136	LOXA137
2004-2010	TP	Mean	66.75	16.90	7.49	67.15	52.89	18.59	66.13	32.34	13.79
2011	TP	Mean	44.33	16.55	8.53	42.12	29.78	11.10	36.68	25.08	16.58
2004-2010	TP	Standard Deviation	4,725.16	706.87	13.20	5,543.52	4,436.53	735.38	6,217.27	1,529.53	110.66
2011	TP	Standard Deviation	497.58	66.61	10.66	515.56	73.05	14.16	379.64	295.15	29.43
2004-2010	TP	25th Percentile	34.00	8.93	5.18	35.80	18.50	8.80	32.00	14.50	8.60
2011	TP	25th Percentile	26.35	12.13	7.00	19.73	23.85	10.18	22.35	16.40	14.18
2004-2010	TP	Median	50.50	12.00	7.15	51.00	28.00	12.00	48.00	21.00	11.00
2011	TP	Median	42.80	14.05	8.20	38.85	27.15	11.45	32.65	17.40	15.45
2004-2010	TP	75th Percentile	79.50	16.00	8.68	76.00	45.85	19.00	74.00	29.50	15.50
2011	TP	75th Percentile	65.15	22.60	8.50	60.90	33.08	12.88	47.93	28.15	17.25
2004-2010	TP	Count	78	64	62	77	43	65	79	51	67
2011	TP	Count	12	8	7	12	4	6	12	6	6
2004-2010	TSS	Mean	6.83	1.94	2.01	7.44	3.84	2.58	6.33	2.85	2.09
2011	TSS	Mean	7.36	2.50	2.62	6.96	2.50	2.64	5.14	4.31	2.50
2004-2010	TSS	Standard Deviation	24.78	1.38	3.27	65.34	9.77	3.36	21.76	4.04	1.41
2011	TSS	Standard Deviation	40.60	0.00	0.10	44.93	0.00	0.12	10.88	8.72	0.00
2004-2010	TSS	25th Percentile	3.00	1.50	1.45	3.50	2.00	1.60	3.00	1.60	1.60
2011	TSS	25th Percentile	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50
2004-2010	TSS	Median	6.00	1.60	1.60	5.50	2.50	2.50	5.00	2.50	1.80
2011	TSS	Median	4.68	2.50	2.50	3.75	2.50	2.50	3.75	2.93	2.50
2004-2010	TSS	75th Percentile	9.10	2.50	2.50	8.00	5.00	3.00	8.00	4.00	2.50
2011	TSS	75th Percentile	9.53	2.50	2.50	8.88	2.50	2.50	6.90	4.59	2.50
2004-2010	TSS	Count	79	57	56	79	37	51	78	39	54
2011	TSS	Count	12	8	7	12	4	6	12	6	6
2004-2010	DEPTH	Mean	0.45	0.18	0.17	0.46	0.15	0.18	0.47	0.18	0.17
2011	DEPTH	Mean	NA	0.13	0.10	NA	0.10	0.11	NA	0.14	0.13
2004-2010	DEPTH	Standard Deviation	0.02	0.03	0.03	0.02	0.05	0.03	0.03	0.04	0.03
2011	DEPTH	Standard Deviation	NA	0.00	0.00	NA	0.00	0.00	NA	0.01	0.00
2004-2010	DEPTH	25th Percentile	0.50	0.10	0.10	0.50	0.06	0.09	0.50	0.09	0.09
2011	DEPTH	25th Percentile	NA	0.09	0.08	NA	0.08	0.08	NA	0.07	0.09
2004-2010	DEPTH	Median	0.50	0.14	0.13	0.50	0.08	0.15	0.50	0.11	0.13
2011	DEPTH	Median	NA	0.12	0.08	NA	0.08	0.11	NA	0.12	0.11
2004-2010	DEPTH	75th Percentile	0.50	0.18	0.18	0.50	0.12	0.18	0.50	0.16	0.18
2011	DEPTH	75th Percentile	NA	0.16	0.12	NA	0.10	0.14	NA	0.17	0.16
2004-2010	DEPTH	Count	31	48	47	30	33	46	29	41	50
2011	DEPTH	Count	0	8	7	0	4	6	0	6	6

PERIOD	STATION	STATISTIC	LOXA138	LOXA139	LOXA140	LOXA141	LOX10	LOX11	LOX12	LOX13	LOX14
2004-2010	ALK	Mean	58.93	17.97	71.52	72.29	41.68	11.74	44.90	15.42	41.99
2011	ALK	Mean	35.30	8.50	58.75	101.31	40.00	15.50	40.31	22.00	51.23
2004-2010	ALK	Standard Deviation	1,469.12	53.58	1,439.26	1,131.50	210.10	14.26	294.17	19.66	288.85
2011	ALK	Standard Deviation	72.00	0.18	262.21	825.39	72.00	0.33	126.50	12.89	732.69
2004-2010	ALK	25th Percentile	34.00	13.00	41.00	44.00	30.00	9.00	30.00	13.00	32.00
2011	ALK	25th Percentile	32.30	8.35	53.03	76.45	37.00	15.00	33.00	19.00	32.00
2004-2010	ALK	Median	40.00	15.00	58.00	68.00	37.00	11.00	42.00	15.00	39.00
2011	ALK	Median	35.30	8.50	58.75	114.00	40.00	15.50	35.50	22.00	34.00
2004-2010	ALK	75th Percentile	85.75	21.00	100.00	97.00	48.00	14.00	55.50	17.00	46.00
2011	ALK	75th Percentile	38.30	8.65	64.48	117.50	43.00	16.00	44.00	25.00	77.00
2004-2010	ALK	Count	26	17	25	41	34	61	79	59	75
2011	ALK	Count	2	2	2	7	2	4	16	10	13
2004-2010	CA	Mean	19.09	7.06	22.81	20.94	11.70	6.42	12.64	7.30	14.83
2011	CA	Mean	18.75	8.57	23.45	32.34	16.85	8.53	11.57	9.72	20.88
2004-2010	CA	Standard Deviation	144.89	4.62	125.22	92.88	17.06	2.68	20.05	3.36	36.83
2011	CA	Standard Deviation	8.41	0.02	14.05	144.29	10.13	2.17	11.28	1.16	134.20
2004-2010	CA	25th Percentile	11.25	5.81	13.00	13.20	8.58	5.10	8.65	6.50	10.95
2011	CA	25th Percentile	17.73	8.51	22.13	21.70	15.73	7.40	9.60	9.03	11.00
2004-2010	CA	Median	13.05	6.70	19.00	19.00	10.25	6.30	12.20	7.40	13.90
2011	CA	Median	18.75	8.57	23.45	35.40	16.85	8.10	10.00	9.10	11.70
2004-2010	CA	75th Percentile	26.50	7.10	29.00	28.10	14.80	7.70	15.25	8.20	16.20
2011	CA	75th Percentile	19.78	8.62	24.78	39.95	17.98	9.23	11.75	10.70	33.10
2004-2010	CA	Count	26	17	25	41	34	61	79	59	75
2011	CA	Count	2	2	2	7	2	4	15	10	13
2004-2010	CL	Mean	30.87	18.62	38.91	36.19	21.83	20.22	26.83	19.93	28.97
2011	CL	Mean	41.70	22.07	57.53	63.25	38.18	25.35	27.52	25.34	54.79
2004-2010	CL	Standard Deviation	306.74	51.83	412.29	388.87	120.21	48.12	123.11	27.36	177.42
2011	CL	Standard Deviation	637.55	11.46	776.97	814.27	513.68	22.34	111.82	12.57	1,308.84
2004-2010	CL	25th Percentile	17.45	14.00	22.85	21.00	13.75	15.33	18.80	15.85	20.50
2011	CL	25th Percentile	21.00	20.25	34.05	39.55	21.65	22.00	20.80	23.20	24.80
2004-2010	CL	Median	24.00	17.10	35.45	34.50	18.40	18.75	25.20	19.25	26.35
2011	CL	Median	39.30	21.50	55.15	55.80	33.40	26.30	23.20	23.85	27.55
2004-2010	CL	75th Percentile	41.08	23.15	50.60	47.00	25.60	23.98	31.70	22.00	33.98
2011	CL	75th Percentile	60.00	23.60	78.63	81.70	49.93	27.00	29.75	27.00	86.30
2004-2010	CL	Count	60	48	54	42	63	72	79	70	76
2011	CL	Count	4	3	4	8	4	15	16	10	14

PERIOD	STATION	STATISTIC	LOXA138	LOXA139	LOXA140	LOXA141	LOX10	LOX11	LOX12	LOX13	LOX14
2004-2010	DCS	Mean	0.28	0.24	0.27	0.71	0.33	0.53	0.84	0.48	0.67
2011	DCS	Mean	0.18	0.19	0.17	0.58	0.17	0.39	0.62	0.41	0.51
2004-2010	DCS	Standard Deviation	0.01	0.01	0.02	0.09	0.01	0.02	0.03	0.02	0.03
2011	DCS	Standard Deviation	0.00	0.01	0.00	0.12	0.02	0.02	0.01	0.00	0.02
2004-2010	DCS	25th Percentile	0.20	0.16	0.18	0.51	0.25	0.43	0.75	0.38	0.55
2011	DCS	25th Percentile	0.18	0.16	0.16	0.35	0.11	0.32	0.59	0.39	0.43
2004-2010	DCS	Median	0.27	0.22	0.25	0.65	0.32	0.53	0.90	0.48	0.68
2011	DCS	Median	0.18	0.20	0.17	0.40	0.20	0.48	0.66	0.41	0.60
2004-2010	DCS	75th Percentile	0.36	0.29	0.37	0.98	0.40	0.62	0.96	0.57	0.78
2011	DCS	75th Percentile	0.19	0.23	0.18	0.89	0.24	0.48	0.70	0.43	0.61
2004-2010	DCS	Count	68	65	68	50	64	72	74	68	72
2011	DCS	Count	3	4	3	5	3	5	6	4	5
2004-2010	NA	Mean	26.46	13.18	37.78	NA	16.04	11.27	17.81	10.77	18.82
2011	NA	Mean	NA	NA	NA	NA	30.75	14.55	16.56	14.31	35.27
2004-2010	NA	Standard Deviation	341.17	16.28	427.47	NA	61.38	8.85	53.44	7.30	76.97
2011	NA	Standard Deviation	NA	NA	NA	NA	120.13	11.90	45.86	2.52	537.15
2004-2010	NA	25th Percentile	14.30	10.38	23.33	NA	10.80	9.28	12.33	9.23	13.05
2011	NA	25th Percentile	NA	NA	NA	NA	26.88	12.00	13.98	13.10	15.10
2004-2010	NA	Median	17.00	12.75	31.60	NA	13.05	10.95	16.20	10.80	17.45
2011	NA	Median	NA	NA	NA	NA	30.75	13.45	15.20	13.40	15.30
2004-2010	NA	75th Percentile	34.05	15.55	54.88	NA	19.15	13.43	21.60	12.38	21.65
2011	NA	75th Percentile	NA	NA	NA	NA	34.63	16.00	16.60	15.20	54.60
2004-2010	NA	Count	7	4	6	0	34	60	78	58	74
2011	NA	Count	0	0	0	0	2	4	16	10	13
2004-2010	SIO2	Mean	10.05	6.21	11.11	9.04	6.46	2.84	6.41	3.41	4.55
2011	SIO2	Mean	8.39	1.16	10.85	14.98	11.27	3.15	7.28	5.58	5.22
2004-2010	SIO2	Standard Deviation	53.32	14.85	60.28	16.03	15.03	2.38	8.00	4.21	9.55
2011	SIO2	Standard Deviation	6.55	0.00	1.45	15.88	14.96	1.28	22.98	3.35	25.41
2004-2010	SIO2	25th Percentile	4.65	3.40	4.31	5.90	3.41	1.63	4.24	2.21	2.17
2011	SIO2	25th Percentile	7.49	1.14	10.43	11.35	9.90	2.41	4.77	5.76	1.01
2004-2010	SIO2	Median	8.45	5.07	11.00	9.20	6.40	2.67	5.68	3.20	3.76
2011	SIO2	Median	8.39	1.16	10.85	17.50	11.27	2.70	5.82	5.94	1.88
2004-2010	SIO2	75th Percentile	13.50	7.38	16.50	12.95	9.42	3.89	8.71	4.17	6.83
2011	SIO2	75th Percentile	9.30	1.19	11.28	17.70	12.63	3.44	7.16	6.42	9.47
2004-2010	SIO2	Count	26	17	25	39	34	60	78	59	74
2011	SIO2	Count	2	2	2	7	2	4	16	10	13

PERIOD	STATION	STATISTIC	LOXA138	LOXA139	LOXA140	LOXA141	LOX10	LOX11	LOX12	LOX13	LOX14
2004-2010	SO4	Mean	2.76	0.43	3.26	5.59	1.26	0.07	0.86	0.07	2.48
2011	SO4	Mean	2.24	0.72	3.75	15.06	1.78	0.08	1.28	0.05	11.56
2004-2010	SO4	Standard Deviation	40.59	0.65	36.18	49.87	2.07	0.00	0.71	0.00	29.50
2011	SO4	Standard Deviation	2.10	0.03	9.66	238.58	0.66	0.00	3.75	0.00	306.76
2004-2010	SO4	25th Percentile	0.49	0.07	0.70	1.16	0.40	0.05	0.30	0.05	0.60
2011	SO4	25th Percentile	1.53	0.62	2.07	2.07	1.15	0.05	0.20	0.05	0.30
2004-2010	SO4	Median	0.70	0.26	1.00	2.70	0.80	0.05	0.60	0.05	1.10
2011	SO4	Median	1.64	0.64	2.73	11.38	1.70	0.05	0.40	0.05	0.50
2004-2010	SO4	75th Percentile	1.50	0.51	1.85	6.50	1.80	0.09	1.20	0.09	2.10
2011	SO4	75th Percentile	2.35	0.78	4.40	23.15	2.33	0.10	1.20	0.05	16.28
2004-2010	SO4	Count	61	47	55	43	64	72	79	70	75
2011	SO4	Count	4	3	4	8	4	15	16	10	14
2004-2010	TDEPTH	Mean	0.20	0.17	0.20	0.48	0.24	0.55	1.16	0.58	1.09
2011	TDEPTH	Mean	0.21	0.16	0.22	0.56	0.11	0.17	0.49	0.27	0.41
2004-2010	TDEPTH	Standard Deviation	0.01	0.01	0.01	0.07	0.01	2.81	6.51	3.16	7.95
2011	TDEPTH	Standard Deviation	0.01	0.01	0.01	0.13	0.01	0.01	0.04	0.02	0.03
2004-2010	TDEPTH	25th Percentile	0.13	0.11	0.12	0.31	0.16	0.25	0.60	0.25	0.45
2011	TDEPTH	25th Percentile	0.14	0.10	0.17	0.37	0.06	0.12	0.34	0.24	0.30
2004-2010	TDEPTH	Median	0.18	0.16	0.18	0.41	0.22	0.33	0.70	0.39	0.56
2011	TDEPTH	Median	0.21	0.17	0.22	0.57	0.08	0.15	0.55	0.32	0.46
2004-2010	TDEPTH	75th Percentile	0.26	0.22	0.26	0.70	0.30	0.47	0.80	0.48	0.66
2011	TDEPTH	75th Percentile	0.28	0.23	0.26	0.66	0.18	0.17	0.57	0.33	0.51
2004-2010	TDEPTH	Count	64	58	61	44	62	76	81	72	78
2011	TDEPTH	Count	4	4	4	7	15	20	17	13	15
2004-2010	TDOC	Mean	21.83	21.99	27.36	19.45	17.11	18.68	16.25	17.65	16.63
2011	TDOC	Mean	35.65	42.20	38.90	23.89	27.25	24.00	18.94	20.21	20.92
2004-2010	TDOC	Standard Deviation	14.71	17.70	70.28	12.70	5.83	11.04	9.69	12.83	7.97
2011	TDOC	Standard Deviation	2.64	2.88	60.50	10.16	0.04	29.46	21.67	6.73	69.00
2004-2010	TDOC	25th Percentile	20.00	19.00	22.00	17.00	15.40	16.00	14.10	15.40	14.80
2011	TDOC	25th Percentile	35.08	41.60	36.15	20.70	27.18	19.30	14.70	18.80	16.10
2004-2010	TDOC	Median	21.60	21.00	26.50	19.00	17.30	18.50	16.00	17.00	16.00
2011	TDOC	Median	35.65	42.20	38.90	24.50	27.25	23.95	18.60	19.05	17.60
2004-2010	TDOC	75th Percentile	23.00	24.00	32.15	22.00	18.30	21.00	17.95	19.00	18.00
2011	TDOC	75th Percentile	36.23	42.80	41.65	26.30	27.33	28.65	21.90	20.43	19.80
2004-2010	TDOC	Count	25	17	24	40	34	61	78	59	74
2011	TDOC	Count	2	2	2	7	2	4	16	10	13

PERIOD	STATION	STATISTIC	LOXA138	LOXA139	LOXA140	LOXA141	LOX10	LOX11	LOX12	LOX13	LOX14
2004-2010	TDS	Mean	179.77	104.29	225.52	185.54	138.06	93.82	131.00	96.64	136.48
2011	TDS	Mean	240.50	177.50	304.50	272.33	201.00	112.50	120.88	100.20	182.62
2004-2010	TDS	Standard Deviation	10,212.26	1,273.85	9,339.26	6,785.50	2,973.60	931.98	2,206.59	754.82	3,452.06
2011	TDS	Standard Deviation	312.50	1,104.50	312.50	23,532.79	1,058.00	755.67	1,954.65	436.84	21,516.76
2004-2010	TDS	25th Percentile	114.00	84.00	150.00	120.00	91.00	70.00	92.50	78.50	101.00
2011	TDS	25th Percentile	234.25	165.75	298.25	178.50	189.50	90.00	96.00	90.00	78.00
2004-2010	TDS	Median	141.50	95.00	212.00	160.00	127.00	89.00	124.00	92.00	131.00
2011	TDS	Median	240.50	177.50	304.50	334.00	201.00	107.00	109.00	102.00	84.00
2004-2010	TDS	75th Percentile	226.50	125.00	270.00	240.00	175.50	109.00	163.50	108.00	150.00
2011	TDS	75th Percentile	246.75	189.25	310.75	361.00	212.50	129.50	160.00	110.00	288.00
2004-2010	TDS	Count	26	17	25	41	31	61	79	59	75
2011	TDS	Count	2	2	2	7	2	4	16	10	13
2004-2010	TOC	Mean	22.67	22.32	28.18	19.67	15.82	17.97	15.92	16.97	16.19
2011	TOC	Mean	35.50	42.05	39.75	24.50	24.85	23.98	18.94	20.37	20.87
2004-2010	TOC	Standard Deviation	33.34	16.97	45.16	14.46	27.94	27.48	19.83	28.36	20.19
2011	TOC	Standard Deviation	1.62	1.13	59.41	8.83	6.85	30.60	22.62	7.83	70.27
2004-2010	TOC	25th Percentile	20.00	19.00	23.00	17.00	15.00	16.20	14.05	15.35	14.30
2011	TOC	25th Percentile	35.05	41.68	37.03	21.80	23.93	19.20	14.80	18.60	16.30
2004-2010	TOC	Median	22.00	22.40	27.50	19.50	17.30	18.00	16.00	16.90	16.00
2011	TOC	Median	35.50	42.05	39.75	24.70	24.85	23.70	18.45	19.10	17.50
2004-2010	TOC	75th Percentile	25.00	24.00	32.18	22.78	18.30	20.50	17.88	19.80	18.90
2011	TOC	75th Percentile	35.95	42.43	42.48	26.95	25.78	28.48	21.65	20.88	20.10
2004-2010	TOC	Count	25	17	24	40	37	61	78	59	71
2011	TOC	Count	2	2	2	7	2	4	16	10	13
2004-2010	DO	Mean	4.98	4.79	5.03	2.94	4.50	4.18	4.76	4.56	4.11
2011	DO	Mean	4.43	5.74	3.17	2.05	2.91	3.44	3.83	5.13	4.36
2004-2010	DO	Standard Deviation	6.35	6.33	4.40	2.89	3.41	4.43	3.13	3.92	2.92
2011	DO	Standard Deviation	1.81	1.93	3.67	2.52	0.38	5.13	6.30	3.78	2.48
2004-2010	DO	25th Percentile	3.36	3.39	3.52	1.46	3.16	2.60	3.13	3.19	2.60
2011	DO	25th Percentile	3.69	4.95	2.12	0.82	2.96	1.68	1.59	3.48	3.26
2004-2010	DO	Median	4.25	4.11	4.63	3.14	4.14	3.90	4.75	4.42	4.30
2011	DO	Median	4.31	5.14	3.55	1.90	2.96	3.30	2.58	5.91	4.10
2004-2010	DO	75th Percentile	5.96	6.01	6.32	3.92	5.56	5.50	6.15	5.87	5.31
2011	DO	75th Percentile	5.05	6.24	4.60	3.09	2.96	5.62	6.50	6.86	5.84
2004-2010	DO	Count	58	49	52	41	60	74	78	70	75
2011	DO	Count	4	3	4	7	5	16	16	10	14

PERIOD	STATION	STATISTIC	LOXA138	LOXA139	LOXA140	LOXA141	LOX10	LOX11	LOX12	LOX13	LOX14
2004-2010	OPO4	Mean	5.90	5.76	7.18	6.06	2.58	2.74	2.99	2.72	2.60
2011	OPO4	Mean	2.00	3.25	2.00	3.07	1.00	1.00	2.32	1.10	1.08
2004-2010	OPO4	Standard Deviation	64.64	49.86	65.35	96.95	1.13	1.66	13.44	1.59	1.80
2011	OPO4	Standard Deviation	0.00	3.13	0.00	2.09	0.00	0.00	22.36	0.10	0.09
2004-2010	OPO4	25th Percentile	3.00	3.00	3.00	2.90	2.00	1.63	1.75	1.50	1.50
2011	OPO4	25th Percentile	2.00	2.63	2.00	2.00	1.00	1.00	1.00	1.00	1.00
2004-2010	OPO4	Median	3.00	3.00	5.15	3.00	3.00	3.00	3.00	3.00	3.00
2011	OPO4	Median	2.00	3.25	2.00	3.30	1.00	1.00	1.00	1.00	1.00
2004-2010	OPO4	75th Percentile	6.00	5.00	7.10	4.50	3.00	3.00	3.00	3.00	3.00
2011	OPO4	75th Percentile	2.00	3.88	2.00	3.45	1.00	1.00	1.00	1.00	1.00
2004-2010	OPO4	Count	21	13	20	35	33	58	75	56	72
2011	OPO4	Count	2	2	2	7	2	4	16	10	13
2004-2010	PH	Mean	6.95	6.76	6.96	6.85	6.65	6.38	6.88	6.42	6.66
2011	PH	Mean	6.49	6.24	6.57	6.72	6.48	6.49	6.66	6.48	6.66
2004-2010	PH	Standard Deviation	0.16	0.22	0.14	0.17	0.10	0.22	0.15	0.16	0.09
2011	PH	Standard Deviation	0.23	0.09	0.30	0.19	0.01	0.06	0.09	0.10	0.02
2004-2010	PH	25th Percentile	6.61	6.39	6.72	6.55	6.50	6.10	6.60	6.16	6.50
2011	PH	25th Percentile	6.37	6.08	6.39	6.46	6.40	6.35	6.50	6.20	6.60
2004-2010	PH	Median	6.88	6.67	6.83	6.81	6.60	6.30	6.80	6.38	6.70
2011	PH	Median	6.65	6.19	6.74	6.78	6.50	6.50	6.65	6.50	6.65
2004-2010	PH	75th Percentile	7.23	7.11	7.12	7.11	6.80	6.50	7.12	6.59	6.80
2011	PH	75th Percentile	6.77	6.37	6.91	6.94	6.50	6.70	6.90	6.50	6.70
2004-2010	PH	Count	61	51	55	42	64	74	79	70	76
2011	PH	Count	4	3	4	8	5	16	16	10	14
2004-2010	SPCOND	Mean	203.70	107.88	251.14	274.93	160.56	110.48	185.65	110.90	197.81
2011	SPCOND	Mean	213.08	119.00	308.68	424.46	197.54	138.78	191.54	133.41	319.76
2004-2010	SPCOND	Standard Deviation	15,683.94	1,372.05	16,147.01	18,021.21	5,456.64	1,297.38	4,705.62	689.86	7,306.26
2011	SPCOND	Standard Deviation	11,366.38	50.89	18,527.04	36,751.45	7,194.26	515.42	4,118.24	281.27	43,412.65
2004-2010	SPCOND	25th Percentile	124.25	85.48	156.45	170.68	111.80	83.40	127.68	95.95	143.03
2011	SPCOND	25th Percentile	128.83	115.25	202.88	255.38	148.60	118.00	143.00	128.00	148.35
2004-2010	SPCOND	Median	151.35	101.35	220.95	251.25	133.00	103.00	170.50	106.50	184.60
2011	SPCOND	Median	194.85	118.20	278.70	391.55	148.60	140.60	170.90	128.75	172.00
2004-2010	SPCOND	75th Percentile	241.80	125.68	305.13	376.05	182.60	123.20	224.05	118.63	218.00
2011	SPCOND	75th Percentile	279.10	122.35	384.50	559.00	221.70	157.20	226.20	145.00	507.00
2004-2010	SPCOND	Count	60	50	54	42	61	65	72	62	68
2011	SPCOND	Count	4	3	4	8	5	14	15	10	14

PERIOD	STATION	STATISTIC	LOXA138	LOXA139	LOXA140	LOXA141	LOX10	LOX11	LOX12	LOX13	LOX14
2004-2010	TDP	Mean	7.00	7.25	10.86	NA	4.35	4.42	4.59	4.49	4.26
2011	TDP	Mean	NA	NA	NA	NA	5.00	3.25	511.44	3.00	4.23
2004-2010	TDP	Standard Deviation	4.57	0.92	33.48	NA	1.93	1.82	2.16	2.29	2.08
2011	TDP	Standard Deviation	NA	NA	NA	NA	NA	2.25	4,116,641.20	0.44	5.19
2004-2010	TDP	25th Percentile	5.75	6.75	6.50	NA	4.00	3.00	4.00	3.00	3.00
2011	TDP	25th Percentile	NA	NA	NA	NA	5.00	2.00	3.00	3.00	3.00
2004-2010	TDP	Median	6.00	7.50	9.00	NA	5.00	4.00	4.00	4.00	4.00
2011	TDP	Median	NA	NA	NA	NA	5.00	3.00	3.00	3.00	4.00
2004-2010	TDP	75th Percentile	8.25	8.00	14.00	NA	5.00	5.00	6.00	6.00	5.00
2011	TDP	75th Percentile	NA	NA	NA	NA	5.00	4.25	6.00	3.00	4.00
2004-2010	TDP	Count	8	4	7	0	34	57	73	57	70
2011	TDP	Count	0	0	0	0	1	4	16	10	13
2004-2010	TEMP	Mean	23.93	24.00	23.85	22.75	22.69	23.02	24.07	23.44	23.66
2011	TEMP	Mean	24.60	24.21	23.98	22.83	23.72	23.76	24.60	22.27	24.12
2004-2010	TEMP	Standard Deviation	28.86	29.54	27.44	19.74	27.31	22.82	22.68	23.43	22.03
2011	TEMP	Standard Deviation	10.27	19.00	3.52	11.39	2.01	12.93	10.36	0.92	7.21
2004-2010	TEMP	25th Percentile	19.85	20.35	20.07	20.40	18.80	19.78	20.68	19.80	20.35
2011	TEMP	25th Percentile	22.87	21.85	22.95	20.47	22.80	21.90	22.73	21.30	22.43
2004-2010	TEMP	Median	25.39	25.68	23.90	22.49	23.80	23.50	25.05	23.70	23.95
2011	TEMP	Median	25.29	23.32	24.25	21.55	23.40	22.45	22.80	22.65	22.85
2004-2010	TEMP	75th Percentile	27.97	27.89	27.68	27.02	27.40	27.33	28.13	27.83	27.90
2011	TEMP	75th Percentile	27.03	26.14	25.28	26.17	23.40	24.40	27.30	23.15	24.90
2004-2010	TEMP	Count	60	50	54	41	65	76	80	72	76
2011	TEMP	Count	4	3	4	8	5	16	16	10	14
2004-2010	TN	Mean	1.27	1.18	1.36	1.09	1.06	1.19	1.14	1.22	0.96
2011	TN	Mean	1.97	2.53	1.98	1.41	NA	1.06	1.51	1.13	1.27
2004-2010	TN	Standard Deviation	0.18	0.18	0.27	0.05	0.14	0.11	0.25	0.22	0.08
2011	TN	Standard Deviation	0.00	0.22	0.01	0.06	NA	NA	0.91	0.01	0.53
2004-2010	TN	25th Percentile	1.11	1.04	1.01	0.93	0.92	0.99	0.91	0.99	0.79
2011	TN	25th Percentile	1.96	2.36	1.94	1.28	NA	1.06	0.86	1.06	0.88
2004-2010	TN	Median	1.26	1.22	1.32	1.10	1.11	1.10	0.98	1.11	0.89
2011	TN	Median	1.97	2.53	1.98	1.54	NA	1.06	0.99	1.08	0.96
2004-2010	TN	75th Percentile	1.50	1.40	1.60	1.23	1.19	1.28	1.20	1.30	1.10
2011	TN	75th Percentile	1.99	2.69	2.01	1.58	NA	1.06	1.87	1.17	1.35
2004-2010	TN	Count	26	17	25	36	30	55	70	52	67
2011	TN	Count	2	2	2	5	0	1	5	3	4

PERIOD	STATION	STATISTIC	LOXA138	LOXA139	LOXA140	LOXA141	LOX10	LOX11	LOX12	LOX13	LOX14
2004-2010	TP	Mean	8.97	7.79	12.58	10.62	8.22	7.78	8.86	7.58	7.07
2011	TP	Mean	9.40	5.33	16.58	22.65	9.50	6.81	8.13	6.40	7.50
2004-2010	TP	Standard Deviation	43.77	13.52	83.69	42.07	8.61	11.83	37.22	4.30	4.06
2011	TP	Standard Deviation	12.91	0.60	62.74	257.79	1.00	3.10	14.38	2.49	11.96
2004-2010	TP	25th Percentile	6.20	5.03	8.93	6.35	6.00	6.00	6.00	6.00	6.00
2011	TP	25th Percentile	7.20	4.90	12.63	13.63	9.50	5.00	6.00	6.00	5.00
2004-2010	TP	Median	8.00	8.00	10.00	9.80	7.00	7.00	7.00	7.00	7.00
2011	TP	Median	9.25	5.10	13.55	19.55	10.00	7.00	6.50	6.50	6.50
2004-2010	TP	75th Percentile	9.75	9.38	13.00	12.90	9.00	8.25	9.00	9.00	8.00
2011	TP	75th Percentile	11.45	5.65	17.50	21.38	10.00	8.00	9.50	7.00	8.50
2004-2010	TP	Count	59	50	54	43	65	76	79	71	76
2011	TP	Count	4	3	4	8	4	16	16	10	14
2004-2010	TSS	Mean	2.63	2.77	2.38	1.99	2.59	2.03	3.23	1.80	1.80
2011	TSS	Mean	2.50	2.50	2.50	11.25	1.50	1.50	2.06	1.50	1.50
2004-2010	TSS	Standard Deviation	4.90	2.49	1.26	0.73	12.49	2.39	107.11	1.71	0.63
2011	TSS	Standard Deviation	0.00	0.00	0.00	491.71	0.00	0.00	2.36	0.00	0.00
2004-2010	TSS	25th Percentile	1.60	2.00	1.60	1.38	1.60	1.50	1.50	1.50	1.55
2011	TSS	25th Percentile	2.50	2.50	2.50	2.50	1.50	1.50	1.50	1.50	1.50
2004-2010	TSS	Median	2.00	2.50	2.00	2.00	1.60	1.60	1.60	1.60	1.60
2011	TSS	Median	2.50	2.50	2.50	2.50	1.50	1.50	1.50	1.50	1.50
2004-2010	TSS	75th Percentile	2.50	3.00	2.50	2.50	2.30	1.60	1.60	1.60	1.60
2011	TSS	75th Percentile	2.50	2.50	2.50	5.38	1.50	1.50	1.50	1.50	1.50
2004-2010	TSS	Count	45	39	41	40	35	61	79	59	75
2011	TSS	Count	4	3	4	8	2	4	16	10	13
2004-2010	DEPTH	Mean	0.14	0.14	0.15	0.29	0.13	0.19	0.33	0.19	0.27
2011	DEPTH	Mean	0.10	0.08	0.11	0.28	0.11	0.14	0.25	0.16	0.22
2004-2010	DEPTH	Standard Deviation	0.04	0.04	0.04	0.05	0.01	0.01	0.01	0.01	0.01
2011	DEPTH	Standard Deviation	0.00	0.00	0.00	0.03	0.00	0.02	0.01	0.00	0.01
2004-2010	DEPTH	25th Percentile	0.07	0.07	0.07	0.16	0.08	0.13	0.30	0.12	0.22
2011	DEPTH	25th Percentile	0.07	0.05	0.09	0.18	0.09	0.08	0.21	0.14	0.16
2004-2010	DEPTH	Median	0.09	0.08	0.10	0.21	0.11	0.17	0.35	0.17	0.28
2011	DEPTH	Median	0.11	0.08	0.11	0.28	0.09	0.08	0.26	0.16	0.23
2004-2010	DEPTH	75th Percentile	0.14	0.12	0.14	0.38	0.15	0.25	0.40	0.23	0.33
2011	DEPTH	75th Percentile	0.14	0.11	0.13	0.33	0.13	0.13	0.29	0.17	0.26
2004-2010	DEPTH	Count	47	40	42	43	67	78	81	73	78
2011	DEPTH	Count	4	4	4	7	5	19	16	10	14

PERIOD	STATION	STATISTIC	LOX15	LOX16	LOX3	LOX4	LOX5	LOX6	LOX7	LOX8	LOX9
2004-2010	ALK	Mean	87.84	41.72	8.90	82.04	9.00	53.35	14.09	10.38	16.47
2011	ALK	Mean	83.29	48.86	NA	71.60	5.00	72.86	18.50	13.50	10.50
2004-2010	ALK	Standard Deviation	1,373.65	488.06	1.66	1,018.98	4.31	397.32	67.01	14.21	21.04
2011	ALK	Standard Deviation	611.91	603.36	NA	336.30	NA	1,052.48	16.57	9.43	4.50
2004-2010	ALK	25th Percentile	60.50	27.50	8.00	57.75	8.00	37.00	10.00	8.00	13.00
2011	ALK	25th Percentile	72.00	28.00	NA	64.00	5.00	49.00	16.25	12.00	9.75
2004-2010	ALK	Median	84.00	37.00	9.50	75.00	8.00	51.50	12.00	9.00	15.00
2011	ALK	Median	75.00	31.00	NA	64.00	5.00	49.00	19.50	12.50	10.50
2004-2010	ALK	75th Percentile	116.00	46.00	10.00	99.75	10.50	62.00	14.00	12.00	19.50
2011	ALK	75th Percentile	99.00	75.50	NA	76.00	5.00	97.00	22.00	13.00	11.25
2004-2010	ALK	Count	75	71	10	46	14	60	66	73	34
2011	ALK	Count	14	14	0	5	1	7	8	8	2
2004-2010	CA	Mean	26.38	13.68	4.36	25.49	4.79	18.20	6.41	5.43	5.66
2011	CA	Mean	25.39	16.35	NA	25.38	4.20	26.37	8.49	6.48	6.20
2004-2010	CA	Standard Deviation	122.48	46.29	0.35	89.14	1.58	46.81	2.89	2.56	1.60
2011	CA	Standard Deviation	84.97	69.34	NA	51.59	NA	112.97	1.36	2.02	3.38
2004-2010	CA	25th Percentile	17.45	9.45	3.83	18.00	4.00	12.90	5.23	4.10	4.68
2011	CA	25th Percentile	20.30	9.33	NA	20.80	4.20	16.00	7.40	5.75	5.55
2004-2010	CA	Median	26.50	11.95	4.25	22.20	4.60	17.60	6.10	5.20	5.30
2011	CA	Median	21.00	10.65	NA	20.80	4.20	28.80	8.70	6.10	6.20
2004-2010	CA	75th Percentile	34.73	14.93	4.83	31.75	5.80	20.60	7.58	6.10	6.58
2011	CA	75th Percentile	31.65	24.05	NA	30.30	4.20	32.40	8.85	6.43	6.85
2004-2010	CA	Count	74	70	10	47	13	59	66	73	34
2011	CA	Count	14	14	0	5	1	7	8	8	2
2004-2010	CL	Mean	49.45	27.50	19.58	48.06	20.57	37.54	22.99	21.67	23.28
2011	CL	Mean	59.27	48.46	24.90	50.99	19.80	57.82	22.20	26.97	22.60
2004-2010	CL	Standard Deviation	591.78	232.09	26.96	509.53	37.56	287.01	73.08	62.82	56.75
2011	CL	Standard Deviation	803.61	1,158.01	32.00	455.15	42.32	868.79	6.22	78.93	19.57
2004-2010	CL	25th Percentile	30.10	17.30	15.70	28.10	15.75	23.60	16.30	15.65	17.83
2011	CL	25th Percentile	41.20	20.23	22.90	34.85	17.50	42.00	20.10	23.00	20.65
2004-2010	CL	Median	44.20	24.70	19.30	45.10	20.40	36.55	22.30	20.00	22.55
2011	CL	Median	46.20	21.90	24.90	48.50	19.80	43.80	21.90	23.20	22.65
2004-2010	CL	75th Percentile	69.30	32.00	22.90	67.40	24.13	47.90	28.05	26.35	28.08
2011	CL	75th Percentile	82.73	78.80	26.90	49.00	22.10	78.35	24.10	26.50	24.60
2004-2010	CL	Count	75	74	41	65	48	70	72	75	60
2011	CL	Count	16	14	2	11	2	11	13	13	4

PERIOD	STATION	STATISTIC	LOX15	LOX16	LOX3	LOX4	LOX5	LOX6	LOX7	LOX8	LOX9
2004-2010	DCS	Mean	0.93	0.77	0.25	0.40	0.28	0.48	0.45	0.46	0.33
2011	DCS	Mean	0.71	0.64	0.16	0.23	0.20	0.30	0.29	0.31	0.26
2004-2010	DCS	Standard Deviation	0.03	0.03	0.01	0.02	0.01	0.02	0.02	0.02	0.01
2011	DCS	Standard Deviation	0.05	0.01	0.00	0.01	0.00	0.01	0.01	0.01	0.00
2004-2010	DCS	25th Percentile	0.81	0.63	0.20	0.29	0.23	0.36	0.37	0.38	0.27
2011	DCS	25th Percentile	0.64	0.56	0.14	0.15	0.19	0.20	0.21	0.27	0.25
2004-2010	DCS	Median	0.96	0.80	0.23	0.38	0.27	0.49	0.45	0.44	0.31
2011	DCS	Median	0.79	0.67	0.17	0.28	0.20	0.35	0.34	0.32	0.26
2004-2010	DCS	75th Percentile	1.07	0.92	0.27	0.47	0.32	0.58	0.52	0.50	0.37
2011	DCS	75th Percentile	0.85	0.67	0.19	0.29	0.20	0.37	0.38	0.39	0.27
2004-2010	DCS	Count	70	71	47	65	51	69	71	73	60
2011	DCS	Count	6	5	3	5	2	5	6	5	2
2004-2010	NA	Mean	33.89	17.83	9.62	31.91	12.39	24.78	13.05	12.78	13.34
2011	NA	Mean	41.51	31.16	NA	38.04	9.40	43.90	14.16	14.26	13.60
2004-2010	NA	Standard Deviation	258.46	106.73	1.88	164.14	12.43	110.60	14.41	16.92	13.76
2011	NA	Standard Deviation	401.37	500.14	NA	251.92	NA	336.07	1.41	2.79	20.48
2004-2010	NA	25th Percentile	21.10	11.30	9.05	20.90	9.40	15.45	10.10	9.75	10.15
2011	NA	25th Percentile	29.40	12.90	NA	29.70	9.40	27.30	13.40	13.03	12.00
2004-2010	NA	Median	30.90	16.30	9.90	29.90	12.60	24.60	12.60	12.15	13.10
2011	NA	Median	31.10	13.80	NA	29.70	9.40	40.10	14.40	13.90	13.60
2004-2010	NA	75th Percentile	46.10	21.60	10.35	40.20	14.00	31.98	15.60	15.30	15.80
2011	NA	75th Percentile	55.48	49.98	NA	52.70	9.40	55.85	14.63	14.58	15.20
2004-2010	NA	Count	73	69	10	47	13	60	65	72	34
2011	NA	Count	14	14	0	5	1	7	8	8	2
2004-2010	SIO2	Mean	7.72	4.60	3.44	9.23	3.90	7.63	5.02	3.82	3.72
2011	SIO2	Mean	10.69	6.16	NA	6.44	0.71	7.67	5.95	2.92	2.12
2004-2010	SIO2	Standard Deviation	21.95	9.97	0.55	26.33	3.16	33.77	5.27	2.78	3.51
2011	SIO2	Standard Deviation	61.23	25.23	NA	15.78	NA	36.71	9.57	1.44	1.71
2004-2010	SIO2	25th Percentile	4.21	2.43	3.13	5.10	2.82	1.77	3.65	2.72	2.28
2011	SIO2	25th Percentile	4.65	1.82	NA	2.94	0.71	1.36	4.72	2.20	1.65
2004-2010	SIO2	Median	6.79	3.73	3.38	7.62	3.85	7.04	4.82	3.83	4.10
2011	SIO2	Median	6.57	3.07	NA	4.92	0.71	10.00	4.90	2.22	2.12
2004-2010	SIO2	75th Percentile	9.66	6.22	3.81	13.55	5.05	11.90	6.45	4.83	5.16
2011	SIO2	75th Percentile	15.73	10.93	NA	10.70	0.71	12.45	4.99	3.80	2.58
2004-2010	SIO2	Count	74	70	10	47	14	59	65	72	34
2011	SIO2	Count	14	14	0	5	1	7	8	8	2

PERIOD	STATION	STATISTIC	LOX15	LOX16	LOX3	LOX4	LOX5	LOX6	LOX7	LOX8	LOX9
2004-2010	SO4	Mean	12.15	2.27	0.08	3.29	0.09	3.64	0.15	0.08	0.07
2011	SO4	Mean	15.05	5.11	0.25	11.15	0.13	7.90	0.14	0.08	0.13
2004-2010	SO4	Standard Deviation	107.50	31.67	0.01	26.90	0.02	110.43	0.02	0.01	0.00
2011	SO4	Standard Deviation	144.48	35.13	0.01	275.52	0.01	81.85	0.04	0.00	0.01
2004-2010	SO4	25th Percentile	2.90	0.30	0.05	0.90	0.05	0.50	0.05	0.05	0.05
2011	SO4	25th Percentile	6.40	0.20	0.23	0.75	0.09	0.40	0.05	0.05	0.05
2004-2010	SO4	Median	9.30	0.80	0.05	1.20	0.05	1.20	0.09	0.05	0.05
2011	SO4	Median	9.20	0.30	0.25	1.40	0.13	8.00	0.05	0.05	0.08
2004-2010	SO4	75th Percentile	18.00	1.90	0.10	2.70	0.09	3.20	0.20	0.09	0.09
2011	SO4	75th Percentile	25.75	11.53	0.28	13.20	0.16	11.05	0.05	0.05	0.15
2004-2010	SO4	Count	75	73	41	65	48	69	72	76	60
2011	SO4	Count	16	14	2	11	2	11	13	13	4
2004-2010	TDEPTH	Mean	1.33	1.11	0.16	0.67	0.19	0.61	0.98	0.91	0.43
2011	TDEPTH	Mean	0.58	0.51	0.10	0.19	0.10	0.23	0.20	0.22	0.13
2004-2010	TDEPTH	Standard Deviation	9.80	7.96	0.00	10.52	0.00	4.19	10.43	8.07	2.64
2011	TDEPTH	Standard Deviation	0.05	0.02	0.00	0.01	0.00	0.02	0.01	0.01	0.01
2004-2010	TDEPTH	25th Percentile	0.60	0.42	0.12	0.19	0.15	0.29	0.26	0.29	0.16
2011	TDEPTH	25th Percentile	0.43	0.42	0.06	0.16	0.08	0.12	0.14	0.17	0.08
2004-2010	TDEPTH	Median	0.74	0.60	0.15	0.26	0.18	0.36	0.34	0.35	0.21
2011	TDEPTH	Median	0.66	0.51	0.08	0.19	0.08	0.23	0.18	0.22	0.10
2004-2010	TDEPTH	75th Percentile	0.88	0.67	0.19	0.32	0.20	0.47	0.42	0.41	0.27
2011	TDEPTH	75th Percentile	0.73	0.58	0.16	0.23	0.09	0.27	0.25	0.26	0.15
2004-2010	TDEPTH	Count	79	77	48	67	51	72	75	78	62
2011	TDEPTH	Count	16	14	12	12	9	13	17	15	11
2004-2010	TDOC	Mean	19.08	15.87	21.96	25.76	21.54	18.12	21.36	21.58	18.07
2011	TDOC	Mean	20.42	19.62	NA	33.46	26.40	26.11	26.13	23.36	29.20
2004-2010	TDOC	Standard Deviation	17.57	7.59	8.53	17.21	17.13	18.84	15.12	22.49	9.32
2011	TDOC	Standard Deviation	19.38	35.13	NA	19.93	NA	23.94	30.40	29.89	6.48
2004-2010	TDOC	25th Percentile	16.30	14.00	20.55	23.80	17.85	15.73	19.00	18.00	15.93
2011	TDOC	25th Percentile	17.18	15.60	NA	33.00	26.40	22.80	23.18	20.25	28.30
2004-2010	TDOC	Median	18.20	15.00	22.00	26.00	22.75	17.00	21.20	21.00	18.15
2011	TDOC	Median	18.30	16.75	NA	33.00	26.40	23.40	23.30	20.70	29.20
2004-2010	TDOC	75th Percentile	22.00	17.05	23.33	28.00	24.75	19.55	24.00	24.20	20.38
2011	TDOC	75th Percentile	22.15	21.65	NA	33.00	26.40	27.45	26.30	25.18	30.10
2004-2010	TDOC	Count	73	71	10	47	14	60	65	73	34
2011	TDOC	Count	14	14	0	5	1	7	8	8	2

PERIOD	STATION	STATISTIC	LOX15	LOX16	LOX3	LOX4	LOX5	LOX6	LOX7	LOX8	LOX9
2004-2010	TDS	Mean	240.31	128.32	87.90	241.39	100.93	179.72	105.86	101.77	98.88
2011	TDS	Mean	249.14	177.71	NA	223.20	28.00	269.43	94.25	97.25	91.50
2004-2010	TDS	Standard Deviation	9,698.16	4,613.02	478.77	6,860.33	834.07	4,012.04	1,223.36	1,410.66	1,230.50
2011	TDS	Standard Deviation	14,128.44	12,201.76	NA	2,017.20	NA	12,727.62	1,439.36	883.36	12,960.50
2004-2010	TDS	25th Percentile	170.50	85.50	81.00	181.50	84.25	130.25	79.50	79.50	75.75
2011	TDS	25th Percentile	162.00	88.00	NA	190.00	28.00	156.00	72.00	82.00	51.25
2004-2010	TDS	Median	230.00	112.00	86.50	235.00	102.00	172.50	101.50	101.00	97.00
2011	TDS	Median	192.00	106.00	NA	192.00	28.00	310.00	96.00	92.00	91.50
2004-2010	TDS	75th Percentile	316.00	154.00	103.25	301.25	113.00	214.25	129.25	126.00	124.25
2011	TDS	75th Percentile	351.50	288.00	NA	264.00	28.00	338.00	101.00	103.50	131.75
2004-2010	TDS	Count	75	71	10	46	14	60	64	71	32
2011	TDS	Count	14	14	0	5	1	7	8	8	2
2004-2010	TOC	Mean	18.77	15.46	16.76	24.50	18.08	17.20	20.95	21.13	16.89
2011	TOC	Mean	20.73	19.90	NA	33.74	27.80	25.90	26.60	23.65	26.00
2004-2010	TOC	Standard Deviation	27.27	18.88	109.07	58.67	89.34	33.83	35.73	39.67	33.75
2011	TOC	Standard Deviation	23.11	35.66	NA	17.08	NA	23.59	29.47	26.05	15.68
2004-2010	TOC	25th Percentile	16.40	14.00	12.78	23.30	15.20	15.05	19.00	18.45	15.55
2011	TOC	25th Percentile	17.23	15.50	NA	33.30	27.80	22.40	23.20	20.50	24.60
2004-2010	TOC	Median	19.00	15.40	20.85	26.00	22.00	17.00	21.20	21.10	18.15
2011	TOC	Median	18.30	17.30	NA	33.40	27.80	23.00	23.40	21.10	26.00
2004-2010	TOC	75th Percentile	22.00	17.48	23.93	28.70	25.00	19.50	24.63	24.58	20.05
2011	TOC	75th Percentile	22.53	22.23	NA	33.40	27.80	27.90	29.15	27.78	27.40
2004-2010	TOC	Count	71	68	12	48	17	58	64	72	36
2011	TOC	Count	14	14	0	5	1	7	8	8	2
2004-2010	DO	Mean	4.69	2.91	4.61	4.32	4.84	4.01	4.87	4.90	4.61
2011	DO	Mean	3.96	2.21	2.86	3.12	3.81	2.55	4.52	3.51	3.30
2004-2010	DO	Standard Deviation	3.12	2.88	3.68	3.81	2.64	2.94	4.69	4.40	3.41
2011	DO	Standard Deviation	6.78	3.38	0.69	2.29	2.33	1.91	2.96	4.00	0.92
2004-2010	DO	25th Percentile	3.38	1.73	3.09	2.85	3.58	2.76	3.24	3.20	3.33
2011	DO	25th Percentile	1.92	0.49	2.38	1.97	3.27	1.68	3.41	1.98	2.95
2004-2010	DO	Median	4.74	2.62	3.81	4.20	4.48	3.88	4.59	5.13	4.50
2011	DO	Median	3.07	1.85	2.38	2.93	3.81	1.80	5.07	2.86	2.95
2004-2010	DO	75th Percentile	5.93	3.91	5.99	5.44	6.08	4.94	6.12	6.26	5.75
2011	DO	75th Percentile	6.40	3.26	3.10	3.61	4.35	4.20	5.28	5.36	3.84
2004-2010	DO	Count	75	74	43	60	46	71	69	71	57
2011	DO	Count	16	14	3	11	2	11	15	15	5

PERIOD	STATION	STATISTIC	LOX15	LOX16	LOX3	LOX4	LOX5	LOX6	LOX7	LOX8	LOX9
2004-2010	OPO4	Mean	2.67	2.62	3.55	2.97	4.00	2.66	2.81	2.81	2.69
2011	OPO4	Mean	2.61	1.08	NA	6.17	1.00	1.00	2.22	1.00	1.00
2004-2010	OPO4	Standard Deviation	1.54	1.27	7.67	2.63	7.17	1.36	3.04	2.45	2.87
2011	OPO4	Standard Deviation	31.96	0.09	NA	136.97	NA	0.00	13.44	0.00	NA
2004-2010	OPO4	25th Percentile	2.00	1.50	2.00	2.00	2.00	2.00	2.00	1.50	1.00
2011	OPO4	25th Percentile	1.00	1.00	NA	1.00	1.00	1.00	1.00	1.00	1.00
2004-2010	OPO4	Median	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	2.50
2011	OPO4	Median	1.00	1.00	NA	1.00	1.00	1.00	1.00	1.00	1.00
2004-2010	OPO4	75th Percentile	3.00	3.00	3.00	3.00	6.00	3.00	3.00	3.00	3.00
2011	OPO4	75th Percentile	1.00	1.00	NA	2.50	1.00	1.00	1.00	1.00	1.00
2004-2010	OPO4	Count	72	69	11	46	13	58	64	70	32
2011	OPO4	Count	15	14	0	6	1	6	9	8	1
2004-2010	PH	Mean	7.05	6.53	6.44	6.72	6.29	6.91	6.33	6.24	6.38
2011	PH	Mean	7.01	6.56	5.97	6.55	5.80	6.75	6.53	6.34	6.06
2004-2010	PH	Standard Deviation	0.18	0.10	0.26	0.09	0.18	0.12	0.17	0.16	0.13
2011	PH	Standard Deviation	0.07	0.03	0.05	0.13	0.08	0.07	0.07	0.13	0.02
2004-2010	PH	25th Percentile	6.90	6.30	6.10	6.50	6.10	6.63	6.10	6.00	6.20
2011	PH	25th Percentile	6.80	6.40	5.90	6.40	5.70	6.55	6.30	6.00	6.00
2004-2010	PH	Median	7.10	6.53	6.30	6.76	6.20	6.90	6.30	6.20	6.30
2011	PH	Median	7.20	6.55	6.10	6.60	5.80	6.80	6.40	6.20	6.00
2004-2010	PH	75th Percentile	7.38	6.70	6.75	6.88	6.40	7.09	6.50	6.42	6.50
2011	PH	75th Percentile	7.20	6.70	6.10	6.80	5.90	6.90	6.70	6.60	6.10
2004-2010	PH	Count	76	75	46	65	48	72	73	75	61
2011	PH	Count	16	14	3	11	2	11	15	15	5
2004-2010	SPCOND	Mean	374.42	187.73	110.14	336.81	103.38	250.22	122.96	112.47	122.06
2011	SPCOND	Mean	406.16	279.51	116.10	316.84	106.40	330.83	140.81	144.88	120.22
2004-2010	SPCOND	Standard Deviation	27,626.88	9,971.32	657.78	23,704.68	470.19	9,238.40	1,593.75	1,477.10	1,032.47
2011	SPCOND	Standard Deviation	29,206.87	34,770.66	201.72	9,907.37	44.18	24,597.75	398.15	1,519.05	255.13
2004-2010	SPCOND	25th Percentile	233.05	127.20	89.70	220.00	87.20	162.75	94.00	86.50	101.05
2011	SPCOND	25th Percentile	292.70	125.65	107.90	269.00	104.05	222.60	128.20	120.80	122.60
2004-2010	SPCOND	Median	340.00	167.40	107.75	299.00	103.30	249.30	113.50	102.10	118.70
2011	SPCOND	Median	317.20	141.00	107.90	293.20	106.40	245.00	141.40	140.30	122.60
2004-2010	SPCOND	75th Percentile	521.05	224.00	131.18	434.30	117.20	290.40	138.70	128.00	139.08
2011	SPCOND	75th Percentile	536.15	440.68	120.20	301.10	108.75	427.65	144.10	147.95	131.00
2004-2010	SPCOND	Count	71	69	46	61	47	66	69	70	58
2011	SPCOND	Count	16	14	3	11	2	11	15	15	5

PERIOD	STATION	STATISTIC	LOX15	LOX16	LOX3	LOX4	LOX5	LOX6	LOX7	LOX8	LOX9
2004-2010	TDP	Mean	4.51	4.48	4.60	6.29	5.93	4.30	4.89	5.22	4.00
2011	TDP	Mean	3.50	4.50	NA	6.75	4.00	3.43	3.29	4.14	3.00
2004-2010	TDP	Standard Deviation	2.05	2.04	2.04	5.53	4.53	3.38	5.29	2.46	1.64
2011	TDP	Standard Deviation	0.88	1.65	NA	11.58	NA	3.29	0.24	0.81	NA
2004-2010	TDP	25th Percentile	4.00	4.00	5.00	5.00	5.00	3.00	4.00	4.00	3.00
2011	TDP	25th Percentile	3.00	4.00	NA	4.00	4.00	2.00	3.00	3.50	3.00
2004-2010	TDP	Median	4.00	4.00	5.00	6.00	5.50	4.00	5.00	5.00	4.00
2011	TDP	Median	3.50	4.00	NA	6.00	4.00	3.00	3.00	4.00	3.00
2004-2010	TDP	75th Percentile	5.00	5.00	5.00	7.00	7.00	5.00	6.00	6.00	5.00
2011	TDP	75th Percentile	4.00	4.75	NA	8.75	4.00	4.00	3.50	5.00	3.00
2004-2010	TDP	Count	69	67	10	45	14	56	65	72	34
2011	TDP	Count	14	14	0	4	1	7	7	7	1
2004-2010	TEMP	Mean	24.30	23.52	23.12	23.17	23.30	22.83	23.71	23.71	23.55
2011	TEMP	Mean	24.01	23.01	21.77	22.50	22.35	22.47	23.74	22.89	24.10
2004-2010	TEMP	Standard Deviation	21.37	20.66	26.55	26.99	28.46	24.34	24.85	25.09	28.99
2011	TEMP	Standard Deviation	12.84	10.06	0.00	22.03	0.00	16.36	19.38	10.98	4.15
2004-2010	TEMP	25th Percentile	21.00	19.95	20.50	19.28	20.10	19.00	20.13	19.88	20.05
2011	TEMP	25th Percentile	21.30	20.90	21.75	18.40	22.33	19.60	20.20	20.60	22.80
2004-2010	TEMP	Median	25.00	23.95	23.90	24.05	24.10	23.30	24.35	24.45	24.70
2011	TEMP	Median	23.30	22.20	21.80	21.60	22.35	20.70	22.80	22.70	24.10
2004-2010	TEMP	75th Percentile	28.40	27.53	27.50	27.80	27.90	27.20	28.30	28.10	28.35
2011	TEMP	75th Percentile	27.00	23.85	21.80	26.70	22.38	26.15	28.45	24.60	24.10
2004-2010	TEMP	Count	77	76	49	68	51	73	76	78	63
2011	TEMP	Count	16	14	3	11	2	11	15	15	5
2004-2010	TN	Mean	1.29	0.93	1.44	1.35	1.52	1.32	1.31	1.42	1.27
2011	TN	Mean	1.34	1.05	NA	1.42	NA	1.56	1.24	1.20	NA
2004-2010	TN	Standard Deviation	0.08	0.06	0.61	0.13	0.13	0.43	0.09	0.15	0.20
2011	TN	Standard Deviation	0.21	0.27	NA	NA	NA	NA	0.01	0.00	NA
2004-2010	TN	25th Percentile	1.14	0.76	1.27	1.12	1.34	1.03	1.17	1.16	1.11
2011	TN	25th Percentile	1.10	0.77	NA	1.42	NA	1.56	1.20	1.18	NA
2004-2010	TN	Median	1.27	0.88	1.37	1.26	1.40	1.13	1.24	1.32	1.22
2011	TN	Median	1.14	0.84	NA	1.42	NA	1.56	1.24	1.20	NA
2004-2010	TN	75th Percentile	1.39	0.99	1.50	1.50	1.60	1.28	1.41	1.59	1.40
2011	TN	75th Percentile	1.38	1.12	NA	1.42	NA	1.56	1.28	1.22	NA
2004-2010	TN	Count	65	62	11	40	14	52	58	64	27
2011	TN	Count	4	4	0	1	0	1	2	2	0

PERIOD	STATION	STATISTIC	LOX15	LOX16	LOX3	LOX4	LOX5	LOX6	LOX7	LOX8	LOX9
2004-2010	TP	Mean	7.53	7.83	9.81	11.26	8.72	6.99	8.81	9.74	7.14
2011	TP	Mean	7.13	8.21	7.00	12.78	7.00	6.91	8.42	16.38	7.75
2004-2010	TP	Standard Deviation	12.09	6.28	33.26	49.35	12.70	13.27	14.69	12.80	8.25
2011	TP	Standard Deviation	22.12	6.95	0.00	51.94	NA	8.49	9.54	208.76	8.25
2004-2010	TP	25th Percentile	6.00	6.00	7.75	8.00	7.00	5.00	7.00	7.00	6.00
2011	TP	25th Percentile	4.00	7.00	7.00	9.00	7.00	5.00	6.00	8.00	6.00
2004-2010	TP	Median	7.00	7.00	9.00	9.00	8.00	6.00	8.00	9.00	7.00
2011	TP	Median	7.00	7.00	7.00	9.00	7.00	5.00	7.00	10.00	6.50
2004-2010	TP	75th Percentile	8.00	9.00	10.00	12.00	10.00	7.00	9.00	10.00	7.50
2011	TP	75th Percentile	8.00	10.25	7.00	13.00	7.00	8.00	12.00	17.00	8.25
2004-2010	TP	Count	76	75	48	65	50	71	75	77	63
2011	TP	Count	15	14	2	9	1	11	12	13	4
2004-2010	TSS	Mean	1.66	1.72	2.73	2.56	4.77	1.80	2.05	2.10	2.07
2011	TSS	Mean	1.50	1.50	NA	1.50	1.50	1.50	1.50	1.50	1.50
2004-2010	TSS	Standard Deviation	0.23	0.34	1.82	7.98	46.84	0.54	7.15	4.96	1.85
2011	TSS	Standard Deviation	0.00	0.00	NA	0.00	NA	0.00	0.00	0.00	0.00
2004-2010	TSS	25th Percentile	1.50	1.50	1.60	1.60	1.60	1.60	1.50	1.58	1.50
2011	TSS	25th Percentile	1.50	1.50	NA	1.50	1.50	1.50	1.50	1.50	1.50
2004-2010	TSS	Median	1.60	1.60	3.00	1.60	1.60	1.60	1.60	1.60	1.60
2011	TSS	Median	1.50	1.50	NA	1.50	1.50	1.50	1.50	1.50	1.50
2004-2010	TSS	75th Percentile	1.60	1.60	3.00	3.00	3.50	1.60	1.60	1.60	1.60
2011	TSS	75th Percentile	1.50	1.50	NA	1.50	1.50	1.50	1.50	1.50	1.50
2004-2010	TSS	Count	75	70	10	47	15	60	66	72	34
2011	TSS	Count	14	14	0	5	1	7	8	8	2
2004-2010	DEPTH	Mean	0.35	0.28	0.11	0.14	0.10	0.19	0.17	0.18	0.12
2011	DEPTH	Mean	0.28	0.26	0.09	0.11	0.09	0.13	0.11	0.11	0.09
2004-2010	DEPTH	Standard Deviation	0.01	0.01	0.01	0.00	0.00	0.01	0.00	0.01	0.00
2011	DEPTH	Standard Deviation	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2004-2010	DEPTH	25th Percentile	0.30	0.21	0.06	0.10	0.08	0.15	0.12	0.14	0.08
2011	DEPTH	25th Percentile	0.22	0.21	0.08	0.09	0.08	0.10	0.08	0.09	0.08
2004-2010	DEPTH	Median	0.35	0.28	0.08	0.14	0.09	0.18	0.17	0.17	0.11
2011	DEPTH	Median	0.30	0.26	0.09	0.11	0.08	0.12	0.12	0.11	0.08
2004-2010	DEPTH	75th Percentile	0.42	0.33	0.10	0.16	0.10	0.24	0.20	0.21	0.14
2011	DEPTH	75th Percentile	0.36	0.29	0.09	0.13	0.10	0.15	0.12	0.13	0.12
2004-2010	DEPTH	Count	79	77	50	67	52	71	76	79	64
2011	DEPTH	Count	17	14	5	9	3	11	13	15	6

APPENDIX B

Table A-2. EVPA and LOXA stations classified into zones for analyses.

Canal	LOXA104, LOXA115, LOXA129, LOXA132, LOXA135
Perimeter (<2.5 km; <1.6 miles)	LOX4, LOX6, LOX10, LOX14, LOX15, LOX16, LOXA101, LOXA102, LOXA103, LOXA105, LOXA106, LOXA107, LOXA109, LOXA112, LOXA116, LOXA117, LOXA118, LOXA122, LOXA124, LOXA126, LOXA130, LOXA131, LOXA133, LOXA134, LOXA136, LOXA137, LOXA138, LOXA140
Transition (2.5 - 4.5 km; 1.6 - 2.8 miles)	LOX12, LOXA108, LOXA110, LOXA111, LOXA113, LOXA114, LOXA119, LOXA127, LOXA139
Interior(>4.5 km;> 2.8 miles)	LOX3, LOX5, LOX7, LOX8, LOX9, LOX11, LOX13, LOXA120, LOXA128